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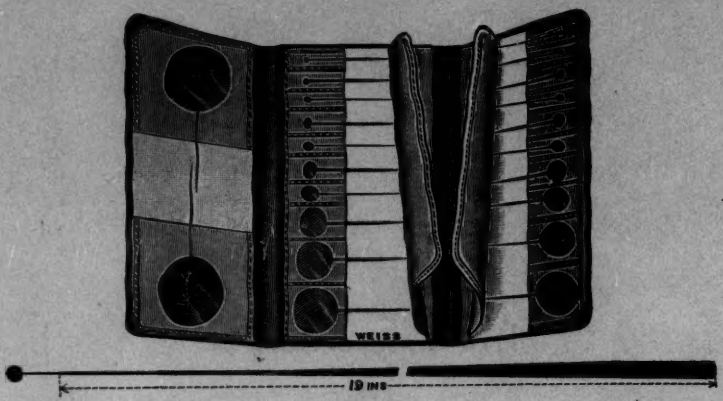

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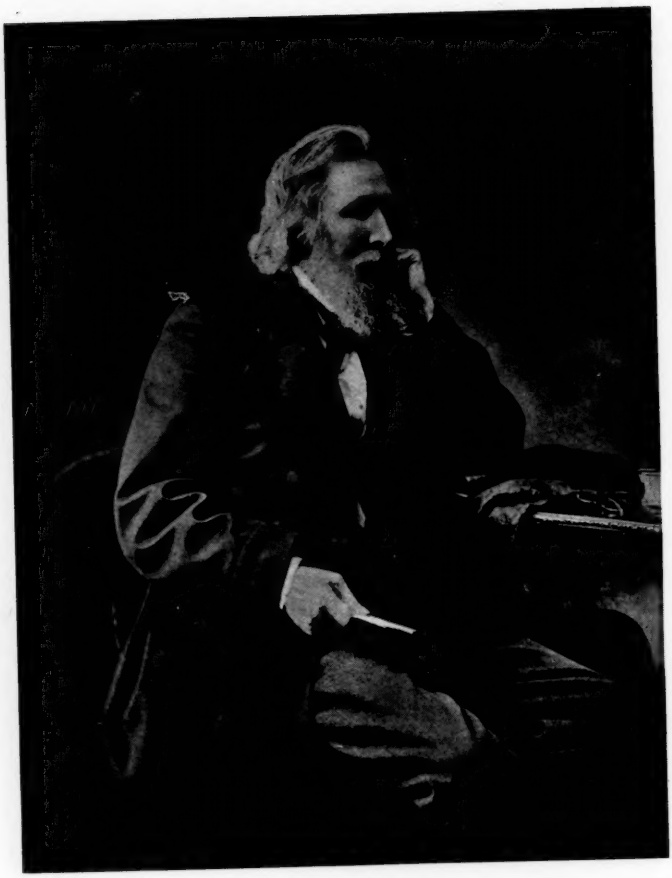

SIR WILLIAM ROBERT WILLS WILDE

(1815—1876)

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THE BRITISH JOURNAL
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FEBRUARY, 1918

BRITISH MASTERS OF OPHTHALMOLOGY SERIES

5.—SIR WILLIAM ROBERT WILLS WILDE
(1815-1876)

BY
J. B. STORY, F.R.C.S.I.,
DUBLIN.

SIR WILLIAM WILDE was born at Castlerea, Co. Roscommon, in 1815. Like many other distinguished men he was of mixed race, his grandfather being an Englishman from Durham, who came to Roscommon as agent to a local landlord, and his grandmother and mother being Irishwomen, natives of Connaught.

He was educated at the Royal School, Banagher, and the Diocesan School, Elphin. It was in boyhood and during school life that he acquired the intense love of fishing and the keen interest in Irish legends and popular superstitions and antiquities which became so prominent a feature in his later life. Wandering over the district and speaking Irish fluently with its inhabitants he was a frequent and welcome visitor at patterns and cockfights, at weddings and funerals, where he noted the superstitions and ceremonies connected with the various feasts, and he repeatedly examined the cahirs, the caves, and the ruined forts in the vicinity of Castlerea and in the plains of Rathcrogan.

Wilde began his medical education in 1832, when he was bound apprentice to the celebrated Abraham Colles, and became a resident pupil in Dr. Steevens' Hospital, to which at that period there was attached a flourishing medical school.

In 1837 he obtained his diploma from the Royal College of Surgeons in Ireland, and shortly afterwards was recommended by Sir Henry Marsh and Dr. Robert Graves to take charge of a patient who was sailing in his own yacht to the Mediterranean. In this vessel Wilde spent nine months, during which time he visited Corunna, Lisbon, Madeira, the Canaries, Teneriffe, Gibraltar, Algiers, Sicily, Rhodes, Asia Minor, Beyrout, Syria, Jaffa, Palestine, and Athens.

The narrative of this voyage was Wilde's first effort in literature. It was published in 1840 in two octavo volumes, and was deservedly successful. The keenness of his observation allowed nothing to escape that attracted his interest, and his interest was boundless. Nature, science, scenery, topography, antiquities, folk lore, humanity, all receive attention in the narrative, and the book remains to this day a most interesting account of the whole region, more especially of the Holy Land.

While still a medical student, Wilde had already written papers, one of which, on "Spina Bifida," was read before a Medical Society in 1836.

It is recorded also that during one summer vacation he boldly opened a child's windpipe with a sharp-pointed scissors, in order to extract a piece of hard-boiled potato, the operation being performed in the presence of the village community on a Sunday morning on his way to church.

An account is given in one of Graves's lectures of Wilde's conduct during the cholera epidemic in Roscommon. A travelling pedlar died of cholera in a lodging house in the village of Kilmaine, and the owner of the house caught the disease, and ultimately died. No one would enter the house, and Wilde stayed there alone in attendance till the patient's death, procured a coffin, and with the help of a drunken pensioner and an ass's cart conveyed the corpse to the graveyard, and buried it with a covering of quicklime. Returning to the house he burned all the furniture, and fumigated the rooms with sulphur and tobacco, the only disinfectants obtainable in Kilmaine.

On his return from the Mediterranean Wilde resolved to become a specialist in ophthalmic and aural surgery, and he devoted the next three years to the study of these subjects in London, Berlin, and Vienna, principally in the last-named capital, where he was a private pupil of the celebrated Professor Jaeger. At Moorfields he worked under Dalrymple, Tyrrell, and Guthrie.

The publication of the narrative of his voyage occupied most of his leisure during his early days in Dublin, but he read papers before various societies on antiquities (home and foreign), mummies, comparative anatomy, etc. He attended the meeting of the British Association at Birmingham, and made communications on

ethnology, the preservation of fish, and the physical geography of the coast of Tyre. Some twenty years later he presided over the ethnological section of the Association, in 1857.

While studying at Berlin he presented a paper upon Irish ethnology to the Geographical Society, but Vienna evidently attracted his interest more than either Berlin or London. It was in those days the most celebrated school of ophthalmology in Europe, and doubtless had even then the charm that Berlin has never been able to exercise upon its visitors.

An interesting account of "Austria: its Literary, Scientific, and Medical Institutions," was published by Wilde in 1843. This work had the important result of calling the attention of the Government of the day to his capacity for dealing with statistics, and he was appointed as medical commissioner to the census of 1841, the report of which was then in process of production.

Wilde held this office till his death, and the censuses of 1851, 1861, and 1871 all contain valuable work from his pen.

The census of 1851 includes the Famine year, the great cholera epidemic, and the fever epidemics. To the report of this decade Wilde appended an analysis of all the pestilences recorded in Ireland from the earliest times. As this analysis fills 600 folio pages of a Parliamentary Report, the reader may form some idea of the amount of labour and research entailed upon its sole author.

It was in appreciation of his work as medical commissioner of the census that he received the honour of knighthood in 1864, an honour which was less common in those days than at present.

Wilde's sympathy with the sufferings of the poor was very keen, and his place in the ranks of Irish ophthalmic surgeons has been mainly determined by his successful efforts to obtain proper treatment for the eye diseases of the poor, not alone in Dublin but all over Ireland.

He began in 1841 by opening a free dispensary for ophthalmic and aural diseases at his own expense. The patients soon became so numerous and the cost so great, that he tried to make it more or less self-supporting by charging a small sum monthly for medicines. At this dispensary 1,056 persons were treated in 1843, and a total of 2,075 from its opening till he succeeded in establishing St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear, in February, 1844. This was a public hospital with a managing committee, Sir Philip Crampton being the consulting surgeon, and Dr. Robert Graves the consulting physician. This hospital maintained a separate existence till 1897, when it was amalgamated with the National Eye and Ear Infirmary, and the building of the Royal Victoria Eye and Ear Hospital undertaken.

In the first annual report of St. Mark's Ophthalmic Hospital the influence of the statistician is evident. It contains a classification

of patients with diseases of the eye and ear, according to their diseases, sexes, and ages. This classification was published annually till the fusion of the two Dublin Eye Hospitals in 1897.

In 1850 the colour of the eyes was noted in every case (gray, blue, hazel, or brown), probably for its bearing on ethnology. This was discontinued in 1871.

In 1850 a list of the operations performed in the three years preceding was also inserted, and this was continued till 1897. The first list of operations is interesting. Cataract was extracted in 55 cases, no doubt by the old flap operation, and was treated by "solution" through the cornea in 76 cases, and through the sclerotic in 14.

The other operations were for artificial pupil, staphyloma, pterygium, strabismus, entropion, trichiasis, ectropion, tarsal tumours, lacrymal sac, epicanthus, and plastic operations on eyelids.

In the first report amaurosis figures as the diagnosis in 5·8 per cent. of the cases, and the percentage is even higher in the report for 1847. In 1850 the affections of the retina are given as asthenopia, congestion, and amaurosis, and in subsequent reports these are under the heading of "Affections of the optic nerve and brain."

It is not until 1863, after the appointment of Mr. Henry Wilson as assistant surgeon, that we have the diseases of the retina separated from those of the optic nerve and brain, and that such anomalies as myopia and presbyopia make their entry.

Glaucoma first appears in 1858, hypermetropia in 1866, detachment of the retina in 1867, sympathetic ophthalmia (*sic*) in 1871, and astigmatism as a separate item in 1875. Amaurosis disappears from the list in 1877.

The first removal of the eyeball on account of sympathetic disease seems to have been done in 1868.

Clinical instruction was given in the hospital from the very start, the earlier students being chiefly men already qualified, but medical students were also present from the commencement. A detailed account of this clinical teaching was furnished to the Board of Superintendence of the Dublin Hospitals by Wilde in 1858.

This course of ophthalmic surgery was recommended to students by the Board of Trinity College sometime before 1858, but attendance at an ophthalmic hospital was not made compulsory in the Trinity College School till 1870.

Wilde took the first step in teaching ophthalmic surgery to medical students in Dublin, and Ireland may be proud of the result that followed his action. It is that for the last 30 years every medical student in Ireland has had to attend an ophthalmic clinic for three months, and also to pass a practical clinical examination before obtaining a surgical diploma.

Wilde's personal contributions to ophthalmic literature are mostly to be found in the transactions of the various medical societies which existed in Dublin during the middle third of last century, and are not of much present-day value.

The *London Journal of Medicine* for 1851 contained an article by him, "Observations on the epidemic of ophthalmia which has prevailed in the workhouses and schools of Tipperary and Athlone." In 1854 he wrote "Medico-Legal Observations upon Infantile Leucorrhoea" in which he established the important point that the disease may occur quite independently of gonorrhoeal contagion.

Trachoma was very prevalent in Ireland during the latter half of last century, as is shown by the reports of St. Mark's Hospital and the census. The disease has greatly decreased since then, although an increase occurred of late years owing to the immigration of Russian Jews, and the strict censorship of the medical officers of American Steamship Companies, which left crowds of trachomatous individuals stranded in Irish seaports. The decrease of trachoma is due to several causes, of which the advance in medical knowledge is one of the most important, and this is largely due to Wilde's activity, but the general increase of cleanliness and better diet have had their share in the improvement. The treatment upon which Wilde relied in this disease was "blue stone" (sulphate of copper), applied as a smooth polished pencil to the conjunctiva, a remedy which to this day is held by many surgeons as the most effective of its type. Expression of the follicles was not a practice in Wilde's day, but he anticipated this development by scraping the excrescences off with his thumb nail. It is needless to observe that antiseptic or aseptic surgery was unknown in Ireland in Wilde's palmy days. Wilde's position in otology has been more widely recognized than in ophthalmology. His book on "Aural Surgery and the nature and treatment of the Diseases of the Ear" (1853) had a large circulation and a world-wide reputation. It is quoted in all the important works on otology published in the third quarter of the last century, and his "mastoid incision" and his polypus snare are noted in all modern books.

For many years Wilde edited the *Dublin Quarterly Journal of Medical Science* (the continuation of the *Dublin Journal*) and most of the literary work published in it during those years came from his pen.

Among his descriptive writings that on the "Beauties of the Boyne and Blackwater," attracted the attention of Macaulay, and the historian had the advantage of being personally conducted by Wilde over the scene of the battle of the Boyne before publishing the account of that event in his "History of England."

Wilde was a man of tireless energy and immense versatility. It was not enough for him to do the work of medical commis-

sioner for three censuses, to create and support and staff the largest, if not the only, eye and ear hospital in Ireland, and to edit the chief Irish medical periodical, but he also wrote interesting books on Irish scenery and topography, and made important contributions to the study of Irish antiquities.

His catalogue of the contents of the Museum of the Royal Irish Academy is a monumental work of archaeological erudition, and deservedly obtained for him the Cunningham gold medal, the highest honour in the gift of the Academy.

In his latter years he lost much of his wonderful energy and the keen interest he took in so many departments of humanity. For instance, it was a matter of astonishment to his pupils that he never really mastered the ophthalmoscope, and he was in the habit of sending his private patients to Mr. Wilson to have the fundus examined, or he would get the opinion of the newly-qualified house surgeon of St. Mark's Hospital.

Honours.—1864: Knighthood by the Earl of Carlisle, and M.D. (*Honoris Causa*) University of Dublin; Surgeon Oculist in Ireland to Her Majesty Queen Victoria (the first appointed); Honorary Member of the Antiquarian Society of Berlin; Member of the Royal Society of Upsala; Companion of the Order of the Polar Star, and Chevalier of the Kingdom of Sweden; Cunningham Gold Medal of the Royal Irish Academy.

Wilde married in 1851 Jane Francisca Elgee, the daughter of a clergyman. They had three children, a daughter who died in childhood, and two sons, of whom the younger was the well-known writer, essayist, poet, and dramatist, Oscar Wilde.

Politically, Wilde was a firm but broad-minded Unionist, but he was very familiar with Nationalist ideals, as these had been enthusiastically advocated by Lady Wilde in her early life, both in prose and verse. Under the pseudonym of "Speranza," she was a frequent contributor to the *Nation*, till its suppression for sedition in 1848. Indeed, the last number of that Journal contained an article from her pen entitled, "Jacta alea est," appealing to the young men to take up arms, and the Crown relied on this article in its unsuccessful prosecution of the editor, Gavan Duffy (later Sir Charles), for sedition.

Wilde's house in Dublin was a rendezvous for everybody distinguished in art, science, or literature, who visited Dublin during the last two decades of his life, and was a sure and certain refuge for every struggling genius or broken-down artist; all were welcome—poet, painter, musician, or litterateur.

Works by Sir William Robert Wills Wilde.

1 "*Narrative of a Voyage to Madeira, Teneriffe,* and along the Shores of the Mediterranean." 2 vols. Dublin, 1840. Second edition, etc., Dublin, 1844.
2 "Austria: Its Literary, Scientific and Medical Institutions." Dublin, 1843.

3 "Lecture on the Ethnology of the Ancient Irish." Extract from the *Dublin Literary Journal*. 16 pp. Dublin, Kirkwood, pr., 1844.
4 "The Closing Years of Dean Swift's Life." Dublin, 1849. Second edition, enlarged, Dublin, 1849.
5 "The Beauties of the Boyne and the Blackwater." Dublin, 1849. Second edition, enlarged, Dublin, 1850.
6 "Observations on the Epidemic Ophthalmia, which has prevailed in the Workhouses and Schools of the Tipperary and Athlone Unions." Reprinted from the *London Journal of Medicine*, Jan., 1851. 30 pp. Dublin, 1851.
7 "Irish Popular Superstitions." Dublin, 1852.
8 "Practical Observations on Aural Surgery and the Nature and Treatment of Diseases of the Ear." London, Dublin printed, 1853.
9 "On the Physical, Moral, and Social Condition of the Deaf and Dumb." London, Dublin printed, 1854.
10 "Medico-legal Observations upon Infantile Leucorrhoea." London, 1854.
11 "A Descriptive Catalogue of Stone, Earthen, Vegetable, Animal and Bronze Materials in the Museum of the Royal Irish Academy." 2 parts. Dublin, 1857-1861.
12 "A Descriptive Catalogue of the Antiquities of Gold in the Museum of the Royal Irish Academy." Dublin, 1862.
13 "An Essay on the Malformations and Congenital Diseases of the Organ of Sight." London, Dublin printed, 1862.
14 "Description of the Tonymore Crannog, County of Cavan." Reprinted from the *Proc. of the Roy. Irish Acad.* 14 pp. Dublin, 1863.
15 "Ireland, Past and Present: the Land and the People." Dublin, 1864. Another edition, *see* Dublin: Young Men's Christian Association: Lectures, 1864, etc., 1865.
16 "Lough Corrib." Dublin, 1867.
17 "*Cleopatra's Needle*. A Proposal Relative to the Nelson Testimonial." Printed for private circulation, 1877.
18 "Memoir of C. Beranger, and his Labours in the Cause of Irish Art and Antiquities." Dublin. H. M. Gill, 1880.

COMMUNICATIONS

NOTES ON SIX CASES OF IRITIS AND CYCLITIS OCCURRING IN DYSENTERIC PATIENTS

BY

EUPHAN M. MAXWELL, F.R.C.S.I., M.B., ATTACHED R.A.M.C. AND WALTER H. KIEP, CAPT. R.A.M.C.

DURING the winter of 1916-17 we have had opportunities of seeing six cases, the subjects of infection with *B. dysenteriae* (Shiga) who developed iritis or cyclitis. All these cases were drawn from the Mediterranean area, and in four of them arthritis occurred as well. Our attention was first directed to this subject by Colonel A. E. Garrod, C.M.G., A.M.S., to whom we should like to take this opportunity of acknowledging our indebtedness.

Case 1.—Pte. W., aged 18 years. This patient reported sick with diarrhoea and the passage of blood and mucus in the stools on September 18, 1916. On September 27, 1916, i.e., on the tenth

day of illness, he complained of stiffness in the right knee. Thereafter the right elbow and the right shoulder, and the left elbow and the left shoulder became involved, and about October 1 or 2, 1916, the left knee became affected as well. On October 15, 1916, the wrists and some of the joints in the right hand were painful. On October 15 or 16, 1916, i.e., about four weeks after onset of illness, patient noticed a slight defect of vision in the right eye. He was seen by one of us on October 18, 1916, when it was found there was well marked ciliary hyperaemia of the right eye, and that the right pupil did not dilate as fully as the left one when the light was screened off. A mydriatic was then introduced into the right eye, and at the end of an hour's time the pupillary ring was found considerably retracted. Examination then showed that, adherent to the anterior capsule of the lens, there were three entities:—(1) a thin membranous film of exudate occupying what had been the pupillary space. (2) A large number of minute opacities peripheral to the foregoing and consisting apparently of albuminous particles. (3) Deposits of uveal pigment arranged fringe-wise round the margin of the membrane, and also extending along three lines running radially between the margin of the membrane and the edge of the iris. At each of these three points the uveal ring of the iris was seen to form a minute papillated projection.

Patient was ordered atropin drops, and by October 22, 1916, the pupil had completely dilated. Patient passed through a severe illness, losing large quantities of blood from the bowel, but the ocular symptoms never increased in intensity. He was last seen on March 8, 1917, when only some dozen or so of opacities could be faintly discerned, adherent to the anterior capsule of the lens, and occupying the site of the original uveal pigment deposits which formed the fringe of the membranous exudate.

This patient's blood serum agglutinated the *B. dysenteriae* (Shiga) powerfully, even in a dilution of 1 in 800, on November 8, 1916. The whole case has been described elsewhere in detail so far as the systemic condition is concerned by Capt. G. Graham, R.A.M.C.

Case 2.—Driver S., aged 22 years. This man developed diarrhoea, with abdominal pains and the passage of mucus in the stools, on September 29, 1916. He was admitted to a General Hospital on October 5, 1916, and for the next three or four days he passed on an average four stools *per diem*, containing both blood and mucus. On October 10, 1916, i.e., on the twelfth day of illness, his eyes became inflamed, both simultaneously, so far as he could remember. On October 14, 1916, the right knee became painful, and three days later the left knee. During the period from October 5, 1916, to November 4, 1916, he ran a temperature of a remittent-intermittent type never exceeding 102° F., as shown on the accompanying chart. He came under our observation on November 14,

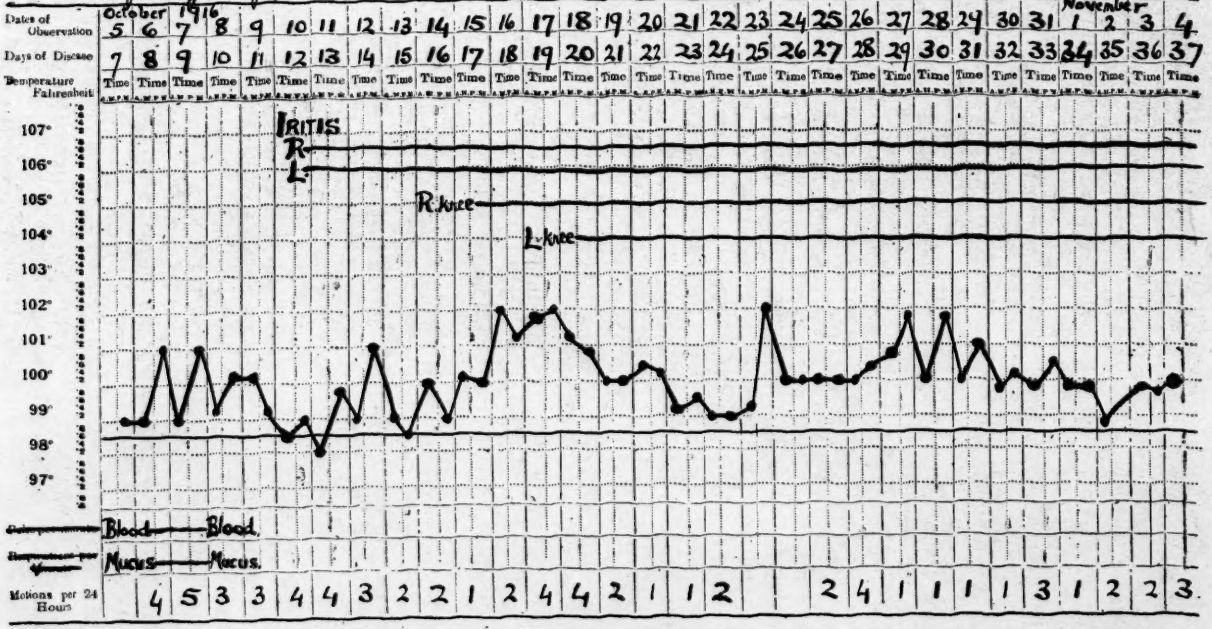
CLINICAL CHART.
(To be attached to Case Sheet.)

Army Form B. 181.

Corps A.S.C. Military Hospital

No. Rank and Name Drover S. (Case no 2) Age 22 Service

Disease Dysentery (Shiga) Date of admission Date of discharge Result



Signature In charge of case

(30814) W6463—H&S 1,000,000. 9/16. D.P.W. A.F.B. 181. (37)b

1916, and was then found to have effusion into both knee joints, more especially the right. There was irido-cyclitis in each eye, with acute tenderness on pressure on the ciliary region, intense photophobia and considerable blepharospasm, and marked circumcorneal hyperaemia. The pupils were irregular in outline, about midway between contraction and dilatation; and the media were hazy by reason of the presence of a large number of opacities in the aqueous and vitreous. On this account fundus details were not visible in the right eye, and visible only in a blurred fashion in the left eye. The energetic use of atropin caused no further dilatation; and it was then seen that there was a complete ring-synechia in the right eye, and an almost complete one in the left eye. On November 27, 1916, the blood was sent to the bacteriologist, who reported the serum to agglutinate *B. dysenteriae* (Shiga) completely in a dilution of 1 in 200 (the dilution was not carried higher); *B. dysenteriae Y* incompletely in a dilution of 1 in 50; and *M. melitensis* and bacilli of the enteric group not at all. On December 7, 1916, patient had pain in the right shoulder for 2 or 3 days. On December 12, 1916, the blood gave a negative Wassermann reaction. By December 17, 1916, the arthritis in the knees had subsided sufficiently to allow of patient getting up for an hour or so daily.

By December 29, 1916, the photophobia had considerably lessened, and the ciliary hyperaemia had almost vanished; by January 8, 1917, the swelling in the knees had disappeared. As patient had a complete ring-synechia in the right eye, it was thought fit to perform iridectomy, and this was done on January 18, 1917. The fragment of iris was removed with all possible aseptic precautions and transferred to a tube of bouillon for incubation. At the same time, samples of the aqueous humour and blood serum were also obtained. The laboratory investigations of this case were undertaken by Captain J. Arkwright, R.A.M.C., for whose kindness we should like to make our acknowledgments. He found that:—(1) The culture of iris yielded Gram-positive cocci, viz., staphylococci and streptococci; (2) The aqueous agglutinated *B. dysenteriae* (Shiga) ++ in a 1 in 80 dilution and + in a 1 in 160 dilution, whilst it did not agglutinate *B. dysenteriae Y* at all in 1 in 20 dilution, and *B. typhosus* only + in 1 in 20 dilution, and not at all in higher dilutions; (3) The blood serum agglutinated Shiga's bacillus ++ in 1 in 400 dilution; Bacillus Y not at all in 1 in 100 dilution, *B. paratyphosi A.* and *B.* not at all in 1 in 100 dilution, and *B. typhosus* + in 1 in 100 dilution. Patient had had inoculation against *B. typhosus* in October, 1915, but, so far as we could ascertain, had not been inoculated against *B. paratyphosus A.* or *B.*

So far as we could ascertain, this patient suffered from an infection with *B. dysenteriae* (Shiga), and no other. In the first place, there was no evidence to show that he suffered from any other infection

that was likely to produce the syndrome of arthritis plus bilateral irido-cyclitis. So far as gonorrhoea was concerned, there was a negative history and no sign of urethritis or other affection of the genito-urinary tract during the four months that he was under observation. In the second place, we excluded the following conditions that might have caused a uveitis. There was no history of syphilis and a negative Wassermann reaction was obtained. With regard to malaria, the evidence against his suffering from this infection is as follows:— (1) In spite of the fact that he was given no quinine from the time that he came under our observation up to the date of discharge, a period of four months in all, he never developed a malarial rise of temperature, even after operation; (2) Before he reached us, viz., from the 7th to the 37th day of illness, he was given quinine, apparently as a routine procedure, yet this does not seem to have influenced in the least the pyrexia from which he was suffering (V. chart). Finally, so far as we could ascertain, patient never had any anti-dysenteric serum, so that such a factor could not have played any part in the production of the arthritis.

Case 3.—G., aged 27. This patient reported sick with diarrhoea on October 27, 1916, when he passed ten stools *per diem*, containing mucus but no blood. He was admitted to Hospital next day (October 28) and the faeces were examined forthwith and found to yield *B. dysenteriae* (Shiga). He passed five or six stools on October 28 and on October 29, but by November 1 the number of stools was one only, and from that time on the bowels moved normally. He was given anti-dysenteric serum on November 1, 1916, and again on November 2, 1916. By November 5, 1916, he felt so well that he went for a walk, and covered two or three miles on foot. When he reached Hospital in the evening he felt his right knee very stiff (10th day of illness). Then on November 11, 1916, he was admitted to Hospital at this Station. He was found to have a well-marked arthritis of right knee, accompanied by severe pain, and was given another dose of anti-dysenteric serum (20 c.c.). On November 17, 1916 (i.e., 22 day of illness) the left knee and right ankle became involved, and on November 19 he had a rise of temperature to 102·2° F., but the temperature reached normal two days later, and with one exception, noted further on, it did not go beyond 99° F. On December 1, 1916 (i.e., on the 36th day of illness) the right eye became inflamed. There was intense ciliary and episcleral hyperaemia; acute tenderness on the slightest pressure being applied anywhere in the region of the ciliary body, and photophobia so severe that he could not bear to open the left eye, which was in no way affected, even in dull light. Ophthalmoscopy was consequently quite out of the question, but at a later date numerous tiny punctate opacites were found in the right vitreous. Intra-ocular pressure,

so far as could be estimated digitally, was normal in each eye. There was an obstinate tendency of the right pupil to contract down, even under atropin, but otherwise there was no sign of involvement of the iris. In spite of energetic treatment with atropin, hot fomentations, leeching at the right temple, and the free use of aspirin, patient remained much in the same condition until December 12, 1916, when it was decided to give anti-dysenteric serum (Shiga), and 20 c.c. were accordingly administered hypodermically. The effect which followed was comparable to that which occurs in a case of diphtheria after the administration of anti-diphtheritic serum. That is to say, the pain, which had been severe, became slight on the following day, and was completely absent within forty-eight hours; the pupil dilated more fully, and reached a state of maximum dilatation three days later; and the circumcorneal hyperaemia diminished steadily and was completely gone within seventy-two hours. On December 15 (i.e., three days after administration of serum) the right vitreous was searched, and numerous minute opacities were discovered in the region of the ciliary body, but no opacities were found on the anterior lens capsule or elsewhere in the aqueous, and the uveal ring was normal. On this date patient opened the left eye for the first time since the right eye had become inflamed. From this time on the right eye made an uninterrupted recovery. On December 24, 1916, the media were still slightly hazy (fundus normal); but by January 1, 1917, the media of the right eye were found to be as clear as those of the left, and all fundus details were normal. Patient suffered from serum sickness on December 18, 1916 (six days after getting serum) viz., his temperature rose to 101·8°F.; he had a generalized urticarial and erythematous eruption, and pain in right shoulder and right metacarpo-phalangeal joint of thumb, but this syndrome lasted for twelve hours only. A blood-culture was taken on December 19, 1916, without any result.

There was a history of gonorrhoea in this case, occurring more than two years previously; orchitis occurred, but there was no ensuing gleet; also a history of septicaemia about twelve years previously (groin-abscess, and whitlows in all his fingers and all his toes).

Case 4.—Private W., aged 45. This patient reported sick with diarrhoea on November 1, 1916. Blood and mucus were passed in the stools, which were so frequent that patient lost count of them. On December 1, 1916, there was a sudden onset of dimness of vision in each eye, which rapidly increased, so that on December 4, 1916, when he first came under our observation, he could only count fingers at a distance of less than one metre. Both pupils were seen to be irregular and to react sluggishly to light, and the intra-ocular pressure was found to be equal to 15 mm. of Hg. as

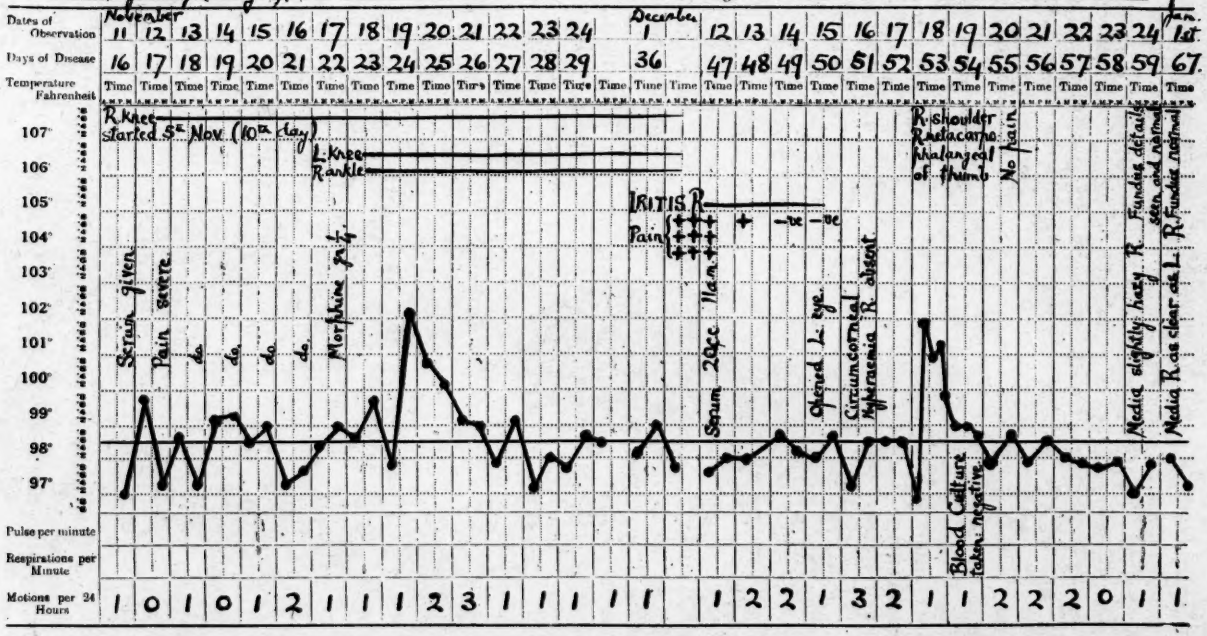
CLINICAL CHART. Army Form B. 181.

(To be attached to Case Sheet.)

Corps _____ Military Hospital _____

No. _____ Rank and Name G. (Case No. 3) Age 27 Service _____

Disease Dysentery (Shiga). Date of admission _____ Date of discharge _____ Result _____


Dates of Observation
November 11 12 13 14 15 16 17 18 19 20 21 22 23 24
December 1 12 13 14 15 16 17 18 19 20 21 22 23 24
Jan. 1st
Days of Disease
16 17 18 19 20 21 22 23 24 25 26 27 28 29 36 47 48 49 50 51 52 53 54 55 56 57 58 59 67
Temperature Fahrenheit
Time
107° 106° 105° 104° 103° 102° 101° 100° 99° 98° 97°
R. knee started 5th Nov. (10th day)
L. Knee
R. ankle
IRITIS R.
Pain
++++
+++
+
-ve
-ve
Serum given
Pain severe
do
do
do
do
Morphine gr ¼
Serum 20cc Man.
Opened L. eye.
Circumcorneal injection
R. absent
R. shoulder & clavicle Malaise & pains in limbs
No pain
Media slightly hazy R. Fundus details clear and normal
Media R. as clear as L. R. Fundus normal
Blood Culture taken: negative.
Pulse per minute
Respirations per Minute
Motions per 24 Hours
1 0 1 0 1 2 1 1 1 2 3 1 1 1 1 1 2 2 1 3 2 1 1 2 2 2 0 1 1

(29342) W9165—M760 1,000,000. 9-16. D.P.W. A.F.C. 181. (373)

Signature _____ In charge of case.

estimated by the Schiötz tonometer. The pupils dilated fully under the influence of atropin within 24 hours, and it was then found that there were deposits of uveal pigment on the anterior lens-capsule in each eye, and also numerous minute opacities dotted all over the anterior surface of the lens-capsules. Patient improved steadily and was able to read 6/9 with right eye with the aid of — 1.5 D.S. combined with — 1.5 D.C. axis 15° down and out; and 6/9 with left eye with the aid of — 1.5 D.S. combined with — 1 D.C. axis horizontal, on January 15, 1917. This patient gave no history of arthritis, nor did he develop any joint affection while under our observation. The blood-serum was found to agglutinate *B. dysenteriae* (Shiga) powerfully in a dilution of 1 in 50, but no other dysentery bacillus at all on December 7, 1916; and on March 12, 1917, a second examination showed the serum to agglutinate Shiga's B, in a dilution of 1 in 100 but no other dysentery bacillus at all. History and evidence of gonorrhoea in this case were negative.

Case 5.—Pte. L., aged 29 years. This man contracted dysentery at the end of November, 1916. About a month later (on December 29, 1916) his eyes became inflamed. He came under our observation on January 2, 1917, when he was found to have marked ciliary congestion right and left, and tenderness on pressure in right ciliary region. With the ophthalmoscope dust-like opacities were seen in the vitreous in the neighbourhood of the ciliary body in each eye, and the fundi were normal. Atropin was ordered but the pupils would not remain dilated with instillations thrice daily, and it was found necessary to introduce the drops six or seven times *per diem* in order to maintain dilatation. By January 25, 1917, the eyes presented a normal appearance. The circumcorneal hyperaemia had vanished; the media were clear; and there was no tenderness on pressure on the ciliary regions. This patient's blood serum agglutinated Shiga's B. ++ in a 1 in 160 dilution, and + in a 1 in 320 dilution; *B. dysenteriae Y* + in a 1 in 80 dilution; and Flexner's B. of dysentery + in a 1 in 160 dilution. By the bacteriologist he was pronounced to be an unequivocal case of infection by *B. dysenteriae* (Shiga).

Case 6.—Pte. Sh., aged 22 years. This patient developed "rheumatism" in right ankle on October 14, 1916. The right knee became involved on October 15, 1916; the right eye on October 16, 1916; the right shoulder on October 18, 1916, and the left eye about November 6, 1916. He gave no history of dysentery, but nevertheless his blood-serum agglutinated *B. dysenteriae* (Shiga) in a dilution of 1 in 800 on January 3, 1917. He admitted that he had had diarrhoea, but that it was so slight that he had paid no attention to it. On the other hand, it should be noted that the faeces were cultivated three times between January 1, 1917, and January 24, 1917, and

yielded negative results each time. There was no history of gonorrhoea, and no evidence of involvement of the genito-urinary tract. Patient had posterior synechiae and deposits of uveal pigment on the anterior lens-capsule of each eye. There was no history of "rheumatism" having ever occurred in his life before, and there was no evidence of his having had malaria.

Conclusions.

(1) Patients suffering from an infection by *B. dysenteriae* (Shiga) may occasionally develop anterior uveitis as a result of this infection, as pointed out by Morax[1].

(2) This ocular affection may, or may not, be accompanied by articular manifestations.

(3) The ocular affections would appear to occur most frequently about one calendar month after the first signs of involvement of the bowel, but may occur as early as the twelfth day (Case 2).

(4) The articulo-ocular syndrome corresponds exactly to that occurring in another affection of a mucous tract, viz., gonorrhoea, as pointed out by Garrod.

A CASE OF SIDEROSIS AFFECTING THE INNERVATION OF THE PUPIL

BY

IVOR LL. TUCKETT, M.D. Cantab.

DILATATION of the pupil following siderosis has been noted before; and Vossius, in a paper on Siderosis Bulbi, read before the Heidelberg Ophthalmological Society in August, 1901 (see *Ophthalmic Review*, Vol. XXI, p. 223), ascribed the dilation of the pupil to a chemical irritation of the sympathetic fibres in the iris. But the following case (which was treated at the Royal London Ophthalmic Hospital, while I was House Surgeon and temporary Curator in 1917, under the care of Mr. J. Herbert Parsons, who has kindly given me permission to publish my observations) appears to show that iron salts injure the endings of the 3rd nerve in the iris rather than stimulate those of the sympathetic; and that the dilatation is due to the prevention of constrictor impulses reaching the iris through the 3rd nerve. Indeed, in this case I have found that the sympathetic nerve endings are injured by iron salts quite as much as those of the 3rd nerve, and that the dilatator pupillae loses its function; so much so that some time after removal of the piece of

1. *British Jl. of Ophthal.*, March, 1917, pp. 186.

iron causing the siderosis, when the constrictor pupillae begins again to respond to light and atropin, the dilatator pupillae is still paralysed and does not respond to cocain.

J. P. was admitted on January 16, 1917. There was a foreign body in the left eye, but there was no visible scar on the cornea or sclerotic, and no definite history of the eye having been hit by a piece of metal. His occupation was that of a tin-smith and plate worker, and he has worked with all kinds of metal plates (copper, tin, zinc, aluminium, iron and brass). The main feature in the history was the fact that at the beginning of August, 1916, the sight of the right eye gradually became slightly misty at night, but by day was good. There had never been any redness. About September 7, 1916, the sight was mistier and some friend noticed that the left pupil was much bigger than the right. His doctor (Dr. Robson) noticed that the left pupil was immobile and inactive to light. He was treated at Maidstone Hospital for six weeks, and then as the eye became painful, he attended Moorfields as an out-patient in November, 1916. In January, 1917, the left eye was quiet and showed no injection or "keratitis punctata." The left pupil was two-thirds dilated and was inactive to light both directly and consensually. There was a kind of faint mottled appearance over the anterior surface of lens and some vitreous haze, also floating vitreous opacities in the extreme periphery below and a black mass on the retina which might be a foreign body. A skiagram showed the presence of a foreign body, when the eye was submitted to the X-rays on January 16, 1917, situated 11 mm. below and 10 mm. deep to centre of cornea and 2 mm. to temporal side. This suggested that the foreign body was embedded in the retina or sclerotic below, or even that it was almost through the sclerotic. I attempted to extract the foreign body with the Haab magnet on three occasions, viz., January 17, 18, and 20, 1917, but without result. On the first occasion I made a conjunctival flap in the lower fornix so as to get as far back as possible and pull the foreign body forward if it was outside the globe.

He was discharged on January 20, 1917, with instructions to return when the new Mellinger magnet was installed. Accordingly he was re-admitted on February 6, 1917. There was very little change in the eye except that the iris stroma was beginning to atrophy and that there was more very fine deposit (suggesting siderosis) all over the front of the lens capsule, and perhaps more vitreous haze. Vision now was only 6/18 partly (unaided) or with + 0·5 cyl. ax. hor.=6/12. The pupil was still dilated, and quite inactive to light. On February 7, 1917, I tried the Mellinger magnet, without much expectation of success, but at last with the largest rod I succeeded in bringing a moderate-sized piece of iron forward into the anterior chamber from behind the iris below. The foreign body was removed through a keratome incision at

the limbus above, and the eye healed up without any adverse circumstance. He was discharged on February 17, when the vision with $\frac{-0{\cdot}75 \text{ sph.}}{+0{\cdot}5 \text{ cyl. ax. hor.}}$ was 6/9, the eye being under the influence of eserin.

On March 3, 1917, when he came to the hospital as an out-patient, there was no light reflex of the left pupil, but it contracted well with eserin. Vision was 6/9 partly (unaided). I prescribed eserin drops ¼ per cent. b.d., for his left eye till March 24, when they were to be discontinued. On April 4 he came to the hospital again. The left pupil now reacted slightly but definitely to light, both directly and consensually, though the response was much more certain in the upper half than the lower. In a dim light the diameter of the pupil was 6·5 mm., but it would not dilate with cocain. The front of the lens still had a finely mottled appearance, and there was still marked vitreous haze. Vision with +0·5 cyl. ax. hor. was 6/6 (slowly) but was said to be misty. On April 28 (eserin having been used for three weeks, but discontinued three days before) the left pupil reacted definitely to light all round its circumference. The size of the pupil on this date was as follows :—

	Right Eye.	Left Eye.
In dim light	7·5 mm. ...	5·5 mm.
In strong light	2·5 mm. ...	3·0 mm.
After cocain in good light	10·0 mm. ...	5·5 mm.

L.V. was 6/6, improved by +0·5 cyl. ax. hor.

Eserin was not prescribed again and when he came up as an out-patient on June 30 the left pupil reacted to light almost as well as the right, but there was a noticeable difference in the briskness of the response. The left pupil, on the other hand, did not dilate nearly as well in a dim light as the right. The following observations were made :—

	Right Eye.	Left Eye.
In dim light	7·0 mm. ...	5·5 mm.
In strong light	2·5 mm. ...	2·5 mm.
After cocain in dim light ...	11·0 mm. ...	6·0 mm.
After cocain in strong light	4·0 mm. ...	4·0 mm.

After homatropin and cocain in the left eye the pupil was 8·5 mm. in diameter and there could be seen five or six deep yellow rusty spots on the front of the lens capsule just uncovered by the margin of the dilated pupil on the temporal side. The front of the lens capsule as a whole was certainly freer from the mottled appearance of a very fine deposit which had always been present before: but there was still some over the upper third of the lens. The large yellow spots were joined up by a line of much finer ones. I am certain that these rusty spots were not present last February when the pupil was widely dilated, and I hazard the suggestion

that they have been formed by an aggregation of microscopic siderotic particles on the front of the lens capsule which are apparently clearing away in this manner. The colour of the left iris was a kind of greyish-brown, while the right iris was a light yellowish-grey. There was still marked vitreous

Diagram of the left pupil of J.P. on June 30, 1917, after instilling 2 per cent. homatropin and cocain.

haze and the outlines of the optic disc were indistinct but I could not see any definite vitreous opacities, even at the periphery below. Vision was 6/6 (unaided) improved by +0·5 cyl. ax. hor. but he said that everything looked misty. He could read J.1 slowly but correctly at a distance of 10 inches with correction for his presbyopia. He was aged 46. The field of vision was markedly restricted in all directions, only extending to 50° on the outer side, 40° below, 30° on inner side and above.

The interest of this case is, I think, considerable; illustrating, as it does, *first*, the success of the Mellinger magnet where the Haab had failed; *secondly*, the recovery of 6/6 vision after siderosis had developed; *thirdly*, the toxic effect of iron salts on the neuromuscular mechanism of the pupil, viz.: marked degeneration or injury of function of both the sympathetic and 3rd nerve fibres ending in the iris; *fourthly*, the recovery of function of the 3rd nerve fibres before those of the sympathetic. If both sets of fibres were degenerated this would suggest that regeneration has taken place more quickly in the 3rd nerve fibres because the nerve cells from which they spring are in the ciliary ganglion. On the other hand, as Parsons and Henderson showed (*Ophthalmic Review*, XXVII, p. 325, 1908), the endings of the sympathetic in the iris seem easily affected by adverse conditions, for they found that cocain produced no effect on the pupil of a rabbit after the cervical sympathetic in the neck below the superior cervical ganglion had been cut. It will be interesting to note if the power of reacting to cocain returns to the pupil in the next twelve months.

TRYPANOSOME KERATITIS

BY

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THE interesting article on "Trypanosome Keratitis," by George E. de Schweinitz, M.D., and A. C. Woods, M.D., in the *Transactions of the American Ophthalmological Society*, Vol. XV, p. 106, (for abstract see the BRITISH JOURNAL OF OPHTHALMOLOGY, December 1917, p. 774) recalls to me a similar result of infecting a dog, reported in the *Journal of Tropical Medicine*, 1911, Vol. XIV, p. 161, the main point being the rapid recovery under treatment with arsenical preparations.

A subsequent statement by E. Treacher Collins, in the course of a discussion on a human case, shown for me by Mr. L. Paton at the Section of Ophthalmology (*Ophthalmoscope*, Vol. XIII, p. 595), shows that the lesions were identical with those described.

Interested mainly in the eye lesions in man in these infections, and their use in aiding the diagnosis of this rather difficult disease, I publish here a list of cases seen in England by myself. These do not complete the list, but there are only some 5 other certain cases, and 2 so doubtful that, as they lack confirmation, I do not include them in my list. The list includes Rhodesian cases, all but one, so far, fatal; 16 cases from Nigeria, but whether these are from infection with *T. gambiensi*, or that described as *T. nigeriensi*, is uncertain; and others, Uganda and the Congo, from *T. gambiensi* infection.

	Cases.	Deaths.	Eye lesions.
Rhodesian ...	8 ...	7 ...	6 (75 per cent.)
Nigerian	16 ...	3 ...	6 (37 „
Uganda and Congo	18 ...	3 ...	3 (16 „
Total ...	42 ...	13 ...	15 (35·7 „)

The eye lesions are similar to those described in dogs, but milder: no visible haemorrhages in the anterior chamber. Keratitis and iritis not severe, and in some cases only congestion of the periciliary ring, and these cases yield more slowly to treatment.

It is difficult to state how long after infection the eye lesions manifest themselves. In some cases they have been the first definite lesion noted by the patients, but the other signs may have been overlooked by the patients and their medical attendant; and there is proof of this in some cases. The onset of eye lesions in two cases was definite, three months after infection; in two, four months; and in one remarkable case, the eye had been removed for neglected irido-cyclitis before the discovery of trypanosomes over

sixteen years ago (probably infected 1900 to 1901), and the lady, although she has had slight trouble with the other eye at times, has now developed severe irido-cyclitis, notwithstanding that she has been living for many years in Canada, and could not have been re-infected.

We generally consider the eye lesions as a toxic phenomenon, and they bear no relation to the number of parasites present in the blood, or the severity of other symptoms. In the human cases recovery rapidly follows treatment by soamin in all but Rhodesian cases. There have been no post-mortem examinations at a time when any eye symptoms were present.

ON CLOSE VERSUS DISTANT ILLUMINATION FOR OPERATIONS

BY

ERNEST E. MADDOX, M.D., F.R.C.S. Ed.

BOURNEMOUTH.

A LITTLE addition which I have made to conjunctival forceps for operations on "after cataract," as well as for emergency night operations, has proved so successful that its description may be of interest to those who have not yet solved their illumination difficulties. It consists in attaching a tiny screened electric lamp to one limb of the forceps, half an inch from the gripping end. This attachment can be made with adhesive strapping, or, better still, by a very light metal clip or steel wire, into the curl of which an ordinary bulb from a child's flashlamp is so screwed as to illuminate the iris brilliantly, when the forceps are gripping the limbal conjunctiva. The connecting cord must be of a featherweight character, and it is a great convenience that the ordinary flash-lamp, sold in so many shops, will provide the electricity required. The grip of the forceps ensures a perfectly steady light, and maintains its distance from the cornea constant. This is better than the plan which has been tried hitherto, and rightly abandoned, of attaching an electric lamp to a discission needle. Is it not a mistake to attach a lamp to any cutting instrument held by the working hand, since the light not only moves with the instrument, but makes manipulation more cumbrous? When, however, the lamp is borne, as I recommend, by fixation forceps, none of these disadvantages apply, and, like the mouse which released the lion, this small expedient is able to solve all difficulties of illumination arising through the absence of an assistant.

It is for "needling" operations that the method is ideal, although it also greatly facilitates the removal of foreign bodies from the

cornea. In iridectomies, and in cataract extraction, the conjunctival forceps are out of use during a part of the operation. Some other way of securing the continuance of the close illumination must therefore be found. There are three which I have employed so far :—

(1). A helper can hold the lamp on the same forceps, or on the end of a short rod, close to the eye.

(2). A lamp fastened to a light eyeglass "finger-piece" by a short flexible wire can be clipped on the patient's nose.

(3). A thin metal disc to which the lamp is attached by a short but flexible silver wire can be fixed by plaster just above the patient's other eyebrow, so as to allow the lamp to be placed in the most convenient position.

A simple calculation with inverse squares shows that, in the absence of a condensing lens, the cornea is more brightly illuminated by a lamp of 2 c.p. at the distance of half an inch than by one of over 1000 c.p. at the distance of a yard ; while with a condensing lens, we have to take into account the focusing of the filament on to one spot of the patient's retina by an approximately parallel beam of light which introduces an irritating element into the illumination quite out of proportion to its brightness.

Though distant lights may have advantages of their own, especially in large hospitals, some form of close illumination will, I think, repay a trial in view of the following advantages :—

(1). Greater economy.

(2). Greater portability.

(3). Greater kindliness to the patient's eye. A close light is diffused widely over his retina, with no possibility of the image of the filament being thereon.

(4). Increase of the surgeon's visual acuteness. The smallness of the patch of light on the patient's eye causes far less chemical waste in the surgeon's retina than a widespread shine from the whole face and pillow.

ANNOTATIONS

Gunn's Dots

Judging from the accounts given of this peculiar appearance of the retina in several recent text-books, there seems to have arisen some misunderstanding. The original description by the late Marcus Gunn appeared in the *Trans. of the Ophthal. Soc. U.K.*, Vol. III, p. 110, 1883. The appearances there described occurred in one family, and are sometimes described as "Crick" dots, from the family name. Gunn described the condition as follows :—

"Very minute yellowish-white shining dots for some distance

around the disc, especially to the nasal side and below. In distribution these dots are remarkably equidistant from each other, and are situated anteriorly to the largest retinal blood vessels, each being less than one-fifth of the diameter of a large vessel ; the outline of the disc is rather indistinct, the large veins full and somewhat tortuous. This appearance is most easily seen when the light is thrown somewhat obliquely on the part of the retina to be examined ; the dots will then be seen to stand out well near the image of the border of the flame."

The first to misdescribe them is Frost, in the " Fundus Oculi." He describes them as occurring at the macula, and figures them in this position in four different plates. Weeks, in " Diseases of the Eye," 1911, says : " The macula lutea sometimes contains a number of minute spots or granules (' Gunn's ' dots) which may be almost black, light-coloured, or glistening." Beard in Pyle's " System of Ophthalmic Practice," says : " In most eyes certain cells or groups of cells in the fovea are transparent, or free from pigment, permitting the red-orange tint of the chorio-capillaris to show as tiny dots. These have been named Gunn's dots, after the late Marcus Gunn, of London, who first described them." Oatman in his stereoscopic atlas, " Diagnostics of the Fundus Oculi," 1913, figures the dots at the macula, and describes it as " a dotted condition of the macula region, first described by Marcus Gunn and since known as Gunn's dots, or, from the family name of Gunn's first cases, ' Crick dots.' These terms are usually applied to small groups of light-coloured spots situated chiefly at the fovea." de Schweinitz, " Diseases of the Eye," 1916, says, in describing the foveal reflex : " This in turn is surrounded by a dark area (the dark spot of the macula), sometimes containing a number of brownish-black or light-coloured or even glistening granules, often called Gunn's dots, which have no pathologic significance."

Whether Gunn's dots have or have not any clinical importance, if considered worthy of notice in text-books, the original description should be followed.

Standards of Vision in Engine Drivers

Among the many problems, the consideration of which is held up by the war, is the fixing of standards of vision for engine drivers on the railways of this country. We believe the present railway regulations are in a chaotic condition. In some cases the tests are good, both as to form-sense and colour-sense, and the examinations are properly conducted. In other companies no standards seem to be fixed or the examinations are carried through in a most perfunctory fashion. We know the difficulties that have had to be faced in

determining the tests for colour-vision in the mercantile marine, and these and other difficulties will have to be met in fixing the visual standards for railway service. The problem is not one for the ophthalmic surgeon alone, but there are certain points on which his aid is essential, and we know that it will be welcomed by the managing bodies of the great railway lines. Apart from the question of colour-vision, there is the need for settling what the minimum of form-sense is that can fit a man for driving an engine, and what kind of test is most suitable. To advise on this requires the combination of the oculist and the engine driver. In daytime there are various influences which affect the visibility of a signal, *e.g.*, the nature of the background against which it shows, or the amount of shadow thrown by its surroundings at different times. Signals cannot always be placed so as to show up against a clear north sky. At night the luminosity and the colour of the signal become of an importance equal to the size. So far as we know, there has been no scientific effort made to standardize any one of the factors nor to arrive at the minimum of form-sense which will enable a man to serve as an efficient and safe driver.

A further problem which will require very tactful handling is that of periodical re-examination. No ophthalmic surgeon will deny the need of this, both as regards form and colour; and yet even in the mercantile marine once a man has passed for his first colour-vision test he is subject to no further examination, although he is possibly more liable than men in other jobs to tobacco poisoning. We think that any ophthalmic surgeon who has an opportunity of considering the various problems involved, will be doing a service to the country if he can formulate some scheme as the basis of discussion.

A Commission of Enquiry on Cinemas

A Commission appointed by the National Council of Public Morals for Great and Greater Britain at the instance of certain cinematograph trade associations, has issued its Report as an imposing volume containing nearly 300 pages.* As regards the well-known cinematograph eye-strain, the Commission recommended "a new copy of each film at every performance," but this was weakened by the addition of the words "or, at least, at frequent intervals." It was also suggested that children should sit at a distance from the screen not less than one and a half times its height, and that the front seats should be removed to at least twenty feet from the screen. The adequate illumination of the picture houses whilst the films are being shown, and other entertainment, as music and songs, were

* Williams and Norgate, London, 1917, price 10s. 6d. net.

advocated to relieve the constant strain on the eyes. Further, that children should not attend too frequently or stay too late. Another recommendation was that power should be given to close the cinema to children in times of epidemics.

As regards the lighting of cinema theatres, the Commission thought the recommendation made by the Secretary of the Illuminating Engineering Society to be reasonable, namely, that while the display was in progress it should be one-tenth of a foot-candle.

Ophthalmia Neonatorum

The *News Letter* is the title of a periodical published five times a year by the National Committee for the Prevention of Blindness, 130, East 22nd Street, New York City, N.Y. The number for October, 1917 (which has recently reached us), contains a table giving statistics of ophthalmia neonatorum during 1916-1917 in thirty State schools for the blind throughout the United States. Briefly, among the 2,961 pupils in thirty State schools, 742, or 25 per cent., had been blinded by the disease; while as regards 558 new admissions, 109, or 19·5 per cent., were in similar case. Closer scrutiny of the figures shows curious differences in the schools belonging to different States. For example, in the Florida State school, those blinded by ophthalmia reach 51·1 per cent. of the total pupils, and in the New Mexico institution, 44·8 per cent.; whereas in the Montana, Virginia, and Nebraska schools, the figures are 7·6 per cent., 7·3 per cent., and 1·7 per cent. respectively. By means of another table it is shown that the proportion of pupils newly admitted to schools for the blind during the last ten years, blinded by ophthalmia neonatorum, has ranged from 26·5 per cent. (1907-8) to 15·1 per cent. (1914-15). With regard to the pupils in classes in the public school systems of six American cities, of 375 pupils, 54, or 14·4 per cent., were blinded by ophthalmia neonatorum; while of 89 admissions to those classes, 10, or 11·2 per cent., were rendered necessary by that disease.

"Collosol" Cocain

Some few months ago (July, 1917, p. 440) we drew attention in these columns to a new product, "collosol" cocain, made by the Crookes Laboratories, London, and to its interesting possibilities in eye work. The other side of the question is now presented in the *Lancet* of December 1, 1917, by Messrs. G. Barger and H. H. Dale and Miss Florence M. Durham. Briefly, in the first communication it was claimed, apparently upon good evidence, that while retaining its anaesthetic action, "collosol" cocain has lost its general toxicity.

The present writers cannot confirm this view. In the samples they examined the toxicity, indeed, was low, but on the other hand, the anaesthetic action was correspondingly low. Both effects agreed satisfactorily with the proportion of cocain chemically recoverable from the solution. The writers furthermore declared that the cocain is not, as claimed, in colloidal solution, as shown by the fact that a sample filtered through a wet collodion membrane under a pressure of about 25 cm. of mercury. On the other hand, the colouring matter of the product was held back by the membrane, so that the resulting filtrate was colourless. The authors reached the following conclusions:—1. The local anaesthetic action of three samples of "collosol" cocain corresponded roughly with that of a 0.25 per cent. solution of pure cocain. In two other samples it was much lower. 2. The toxicity of the three better samples was about one quarter of that of 1 per cent. of cocain. 3. The quantity of cocain chemically recoverable from each of the three samples was approximately 0·24 per cent. instead of 1 per cent. as indicated. 4. The cocain which was present passed freely through a collodion membrane, and was therefore not in colloidal solution. Meanwhile the matter is not at an end. A letter appeared in the *Lancet* of December 15 last from Mr. Lewis Stroud, M.A., of the Crookes Laboratories, in which several of the statements of Dr. Dale and his colleagues are traversed.

The Lucien Howe Prize Fund

The Committee in charge of the Lucien Howe Prize Fund of the Medical Society of the State of New York suggests the following as suitable subjects for essayists:—

1. Renal permeability; its relation to the pathology and prognosis of diseases of the eye.
2. Describe the ocular changes, diagnosis, etc., of general paresis and tabes dorsalis, including peripheral and central lesions and the pathological conditions peculiar to each—with differentiation from lesions found in cerebro-spinal syphilis.
3. Give the effects of shell shock upon the optic nerve, as occuring in the present war.

The prize fund amounts to 100 dollars. Essays must be in the hands of Dr. Albert Vander Veer, chairman of the committee, at 28, Eagle-street, Albany, N.Y., not later tban April 15, 1918.

"Shell Shock"

Among the after-war problems presented to ophthalmic surgeons will be one which deals with army pensioners who have suffered or

are still suffering from "shell shock" and other war neuroses. Not a few pensioners have already applied to the Military Hospitals for relief of ocular symptoms occurring in conjunction with alteration of function of the central nervous system. The symptoms are similar in a very large number of cases.

The following are the most prominent:

1. The patient cannot read print at near range for more than a few moments (or minutes in cases less severely affected) without blurring of the letters. The effort is accompanied by an aching in the eyes, by headache (frontal) and sometimes by "watering" of the eyes.

2. After gazing at distant objects for a few moments a "mist" comes in front of the eyes. "Objects appear, disappear, appear again."

3. Bright sunlight or artificial light causing aching at the back of and around the eyes. It makes the eyes "water."

4. There are pains (as distinguished from headache) in various parts of the head, more commonly in the temples, radiating beyond the ears to the occipital region. The pain spreads from the occipital region down the neck. It is described as "neuralgic" in character. Almost without exception frontal headache is present.

After having seen a large number of cases with the above symptoms, it is difficult for the ophthalmic surgeon to persuade himself that they are associated with an error of refraction or a pathological want of balance of the ocular muscles. All of these cases are confident that they have not suffered from ocular discomfort before.* Would it not be wise to send all cases of this kind to the neurologist or psychologist? Certainly we must look forward to an extensive organization for dealing with cases of functional diseases of the central nervous system.

Trachoma and the American Forces

At the June meeting of the Ophthalmological Section of the American Medical Association a resolution (proposed by Dr. F. Park Lewis) was adopted, urgently directing the attention of the authorities to the danger of the spread of trachoma through men conscripted for the United States Army, and calling for the exclusion of any found to be infected with the disease. The U.S. Public Health Service has now issued a special statement urging physicians to institute a careful examination for the disease, and to arrange for the treatment of any affected recruits. Meanwhile, the National Committee for the Prevention of Blindness has made

*With the exception of those men who were then suffering from "neurasthenia" in a greater or lesser degree and were taken into the Army.

enquiries into the prevalence of trachoma in the U.S. Navy during recent years, and has published (The *News Letter*, October, 1917) the following figures submitted by Surgeon-General W. C. Braisted, of the American Navy:—

Year.	Strength of Navy and Marine Corps.	Cases of Trachoma.
1912	61,897	3
1913	65,926	8
1914	67,141	8
1915	68,075	31
1916	69,294	12

American Ophthalmology and the War

Major James Bordley, chairman of the sub-committee of ophthalmology of the Council of National Defence, recently outlined to the Clinical Congress of Surgeons of North America, the more important steps taken by his sub-committee with regard to ophthalmology in war. These form interesting reading to the Allies. The sub-committee includes Majors G. E. de Schweinitz, Nelson Miles Black, W. H. Wilmer, Walter R. Parker, and Allen Greenwood. A complete and classified catalogue of all ophthalmologists in America was prepared, and the names of 1,400 men willing and qualified to serve were handed to the Surgeon-General. Of this number more than 300 have been commissioned and upwards of 200 ordered on active duty. The sub-committee has studied the Surgeon-General's plans for the organization of the army hospitals, and, where requested, has made suggestions as to the staff and equipment necessary for eye work. A small book has been written ("Ophthalmic Military Surgery, with chapters on Trachoma and Malingering.") The visual requirements for various services of the Army have been considered. The sub-committee of ophthalmology has suggested a glass which possesses a selective absorption of light waves for use in binoculars, field glasses, and range-finders. It has caused to be made for the first time in the United States the soda glass necessary in the manufacture of artificial eyes, heretofore obtained exclusively from Germany. A member of Major Bordley's sub-committee has devised a plan for protecting eyes against injury, believed to be of far-reaching value. The re-education of blind soldiers has not been overlooked. Twelve of the leading authorities on the blind have been called together, so that this complex question may be fully considered. In order to assist the work a patriotic lady has placed her country estate at the disposal of the Surgeon-General. Soldiers blinded in the war will be retained in the military service until they have been trained and placed in a suitable trade or profession. Lastly, ophthalmology is to be grouped with

brain surgery, the plastic surgery of the face, and oto-laryngology into a department on "Surgery of the Head."

An account of Major Bordley's remarks will be found in the December number of our contemporary, *Surgery, Gynecology, and Obstetrics* (p. 727).

ABSTRACTS

1.—THE CANAL OF SCHLEMM

Maggiore, L. (Rome).—The structure, behaviour, and significance of the canal of Schlemm in the human eye in normal and pathological states. (Struttura, comportamento e significatio del canale di Schlemm nell 'occhio umano in condizioni normali e patologiche.) *Annal. di Ottal. e Clin. Ocul.*, May-June, 1917.

Maggiore gives an account of his investigations into the anatomy of the canal of Schlemm. His methods included the injection of coloured masses by the arterial trunks, the examination of serial microscopic sections and the plastic reconstruction of such sections in the method used by embryologists. As a result he states that:—1. The canal of Schlemm in man, from the morphological standpoint, is evidently a vascular structure. 2. The canal is joined to a closed vascular plexus (deep peri-corneal plexus) formed of numerous veins, with a few slender and scanty arterial twigs. 3. The connections between that plexus and the canal are formed by a small number of collecting trunks, about 20 to 30, with very small lumen, and even when filled with red blood corpuscles, they only appear as slits. 4. There are no preformed spaces round the canal or the collecting trunks.

He made further experiments on a possible connection of the canal with the anterior chamber and was able to satisfy himself that no such connection existed, and that the canal had a complete endothelial lining. He also found that under normal conditions the canal contains only lymph and not red blood corpuscles, although these latter may easily be forced into it under conditions of pressure. He made some examinations of the eyes of animals, especially those likely to be used for experimental work, and found it necessary to draw a distinction between the canal and the spaces of Fontana, as the one may exist without the other. In man the only evidence of a canal of Fontana is to be found in the seventh month of foetal life and disappears at birth. The ape, whose eye most resembles the human one, possesses a canal of Schlemm exactly similar, but,

in addition, has the spaces of Fontana developed to the same extent as the seventh month human foetus. Another group of animals, birds, and some mammalia, possess both a well-developed canal of Schlemm and spaces of Fontana. A third group, ruminants, carnivora, etc., present a well-differentiated canal of Fontana, but only a rudimentary canal of Schlemm. The rabbit, which has been much used for the study of intra-ocular lymphatic circulation, is not well suited for this purpose, since it possesses no canal of Schlemm, and also differs considerably in other respects from the human arrangements in the corneo-iridean angle. A fourth group, represented by the fishes, possesses neither a canal of Schlemm nor spaces of Fontana.

Maggiore finally gives the result of his examinations of a number of pathological specimens, and arrives at the following conclusions :—

1. There is no original lesion of Schlemm's canal, apart from the congenital defects that are found in infantile glaucoma and aniridia which are due to developmental errors. 2. All alterations of the canal are secondary to alterations in the corneo-scleral trabeculae, or to the destruction of the iris angle from the adhesion of the root of the iris to the trabeculae. 3. The trabeculae alone show any change in about 10 per cent. of cases; in the rest such changes are connected with the adhesion of the root of the iris. In this connection he gives a list of the changes that may be found, and illustrates them fully. 4. He gives a list of the various ways in which he has found the lumen of the canal altered or obstructed. 5. The function of the canal may be completely abolished without any alteration apparent in its structure, since the operation of the canal and the accessory trabeculae depends on the freedom of the surface of the latter from any adhesions.

The paper is accompanied by a copious bibliography and nine well-reproduced plates illustrating the various points referred to.

E. E. H.

II.—THE INTRA-OCULAR PRESSURE

Magitot, A. (Paris).—The physiological intra-ocular pressure. (La tension oculaire physiologique.) *Ann. d'Ocul.*, Vol. CLIV, May, June, July, 1917.

This article is a companion to **Magitot's** other article, that on the aqueous and its origin, and deals in a similarly complete manner with much of the work done on the subject, both by the manometer and by the tonometer. It runs to some 72 pages of the *Annales* and the bibliography gives over 90 references. The subject is treated under numerous subsections, in many of which

interesting experiments and findings of various observers are detailed. The author gives the following list of conclusions :—

First.—The normal intra-ocular pressure in man oscillates between 15 and 25 mm. Hg., within which limits the pressure can vary from one day to another, and often in the same day. It seems lower in the elderly that in the very young, according to the average.

Second.—The pressure undergoes variations along with the arterial pressure, but the eye possesses a self-regulating mechanism which deadens the rises of pressure chiefly.

Third.—The factors capable of influencing the pressure are the general blood circulation, the local blood circulation, and the constitution itself of the walls of the eye.

Fourth.—The eyeball is distensible in the adult to a certain extent, owing to the abundant elastic fibres in the sclera. When the eye has been distended it has a tendency to retract secondarily, and this retraction is greater than before the distension. The uvea is none other than an erectile tissue, an actual blood reservoir, the greater or less repletion of which regulates the pressure. The rôle attributed to it of keeping the retina at a normal temperature for the purpose of its proper functioning is hypothetical, and not supported by the anatomical structure. The uvea has special vaso-motor nerve fibres of its own, and it contains nerve cells of the sympathetic type which can group themselves in masses, and constitute a peripheral ganglion.

Fifth.—The variations of pressure within the so-called normal limits are chiefly due to variations in the general arterial pressure. This influence can be experimentally demonstrated, hypotension and hypertension being induced artificially. Variations of the general blood pressure are accompanied by more decided hypotensions than hypertensions.

Sixth.—The relationship between the ocular and the arterial pressure may be compared to that between the pulse and the temperature. One can dissociate the two experimentally, quite a frequent occurrence normally.

Seventh.—The pressure is much more subject to variations of the local circulation than to those attributable to the general circulation. This can be shown by inducing either an active or a passive intra-ocular hyperaemia. The latter can be got by suppressing either the posterior venous channels (the vorticose veins) or the anterior (the anterior ciliary veins). The former can be got by provoking a temporary or permanent local inflammation. These chemical or mechanical irritations act by influencing the intra-ocular vaso-motor reflex.

Eighth.—Among the ocular nerves the cervical sympathetic or its ganglia are alone capable of influencing at a distance the pressure of the eye. The trigeminal nerve acts only through its borrowed

filaments, or as a sensory centripetal channel. Section of the cervical sympathetic or of the superior cervical ganglion leads to a slight hypertension, while its stimulation leads to a hypotension, whatever the animal experimented on.

Ninth.—The sympathetic centres capable of altering or influencing the pressure are three in number: (*a*) the primary centre, bulbo-medullary, with an action especially dilatatory; (*b*) the secondary centres, cervical and cephalic, with an action mostly constricting; and (*c*) the tertiary centres, ocular, with a variable action. This last is the most important, and is, in fact, the real regulating organ.

Tenth.—The aqueous humour has no influence on the pressure. Not being constantly secreted and perpetually eliminated, its rôle is limited to that of an incompressible cushion of fluid. None the less, it is subject to qualitative modifications; its tenure of proteid substances increasing whenever a vaso-dilatation induces a rise of pressure. These appearances of albuminoid substances and of anti-bodies, normally absent, are connected with the transudation of a more or less large quantity of blood serum through the dilated capillaries. Experiments in fact show the absolute parallelism existing between the hypertension and the qualitative variations of the aqueous, the two phenomena being due to one cause: dilatation of the vessel walls.

Eleventh.—Collyria or drops have little influence on the pressure of the normal eye, but the feeble differences which result from their instillation are due to the action of these drugs on the diameter of the vessels of the uvea.

Twelfth.—The intra-ocular pressure is solely under the influence of the greater or less repletion of the ocular vessels, and these vessels are themselves regulated by their nerves, but one cannot insist too much on the capital importance which attaches to the ocular sympathetic centre in this innervation.

W. C. SOUTER.

III.—ANAPHYLAXIS

(1) **Schieck (Königsberg).—Can interstitial keratitis depend upon anaphylactic conditions? (Kann die Keratiti sparenchymatosa auf anaphylaktischen Zuständen beruhen?)** *Zeitschr. f. Augenheilk.*, Bd. XXXII, S. 96.

(1) **Schieck** seeks in this article to show that it is very probable that interstitial keratitis is caused, not by the direct action of toxins, but by an anaphylactic condition caused by the previous action of toxins. There are many difficulties to be explained if we assume the direct toxic effect. It is hard to understand why there should be an

interval between the outbreak in the first and second eye. The effect of an accident in determining an attack is another anomaly which the toxic theory does not account for. Again, it has been shown that the cornea of a syphilitic foetus is full of spirochaetae, and yet the disease is rare in infancy.

Wesseley's experiment points out the probable genesis of the affection. He showed that if some horse or ox serum be injected between the corneal lamellae of a rabbit, after an interval of twelve days, the cornea becomes clouded, and a condition very similar to interstitial keratitis develops. If now the same experiment be made upon the second eye of the rabbit, the keratitis appears after a few hours. The same is true if the serum have previously been injected subcutaneously. This procedure shows that an injection of foreign serum gives rise to an anaphylactic state which makes the cornea more sensitive to an injection of the same serum.

Schieck supposes that some auto-anaphylaxis may sensitize the cornea, and make it liable to interstitial keratitis.

In the case of syphilis the cornea is sensitized by the spirochaetae, which are present in the foetal circulation. Later on in life an accident or other circumstance may moblise a new strain of spirochaetae, which now liberate ferments which cause changes in the blood serum, producing bodies similar to those antigens which have previously sensitized the cornea. Then the inflammation develops.

T. HARRISON BUTLER.

(2) **Szily, A. v. (Freiburg i. B.).—Thoughts and experiments on the rôle of anaphylaxis in ocular inflammation. (Versuche Gedanken ueber die Rolle der Anaphylaxie bei Augenentzündungen.)** *Klin. Monatsbl. f. Augenheilk.*, Bd. LIV (1915), p. 1.

(2) **von Szily's** paper is divided into three parts. The first reviews our present knowledge as regards theories and experiments bearing on anaphylactic inflammation of the eyes; the second deals with the question of the so-called "sympathetic sensitivisation" (*Sensibilisierung*) from eye to eye; and the third discusses the source of the irritant substances. The article should be read in the original by those who are interested in this very difficult and complex question. The author summarizes what he has to say as follows:—

(1) Local anaphylactic inflammations of the eye have undoubtedly great theoretical and practical significance in human pathology.

(2) The requisite conditions for the production of an irritant anaphylactic poison are frequently present in the course of various eye affections. The specific micro-organisms, or, under certain circumstances, special tissues may be the source.

(3) On account of the great variety of possible sources of

anaphylotoxin, and especially in view of the absence of specificity in its action, it is at present impossible to regard anaphylactic processes as the primary causes of definite types of eye disease.

(4) The assumption of the existence of primarily active toxins for the production of anaphylaxis is necessary for the full recognition of the significance of anaphylactic processes in human pathology.

Anaphylactic inflammations have not yet been seen to cross over to the intact second eye.

(5) The theory that the specific or non-specific inflammatory sensitivisation (*Sensibilisierung*) of one eye increases the sensitivity (to inflammation) of the other, has no experimental basis.

(6) The importance of anaphylactic processes in ophthalmology consists in the possibility they offer of a new explanation of inflammatory conditions in the eye which are not adequately explained by the direct action of local micro-organisms and their toxins.

H. M. TRAQUAIR.

(3) Trubin, A. (Warsaw). — On intra-ocular anaphylaxis with the use of ox- and sheep-vitreous as antigen. (Ueber intraokulare Anaphylaxie bei Anwendung des Rinder- und Hammel-glaskörpers als Antigen.) *Arch. f. Ophthal.*, Vol. LXXXIX, Part 2, 1915.

(3) **Trubin** records the results of some experiments on the production of local anaphylaxis in the eye. Rabbits were the animals used. These were sensitized by the intravenous injection of 18-70 c.cm. of ox- or sheep-vitreous twenty to fifty-five days before the injection of the antigen into either the vitreous, anterior chamber, or substance of the cornea. When more than 25 c.cm. of the vitreous was used the injections were made at intervals of five days, and in separate doses. No effect of the vitreous injection on the health of the animal was observed. The amount of antigen injected was 0·25 c.cm. The results obtained were as follows :—

1. It is possible in animals which have been sensitized with ox- or sheep-vitreous, by direct injection of antigen into the eye, to produce changes which must be considered as anaphylactic, which did not take place in the control animals.

2. The most intense and enduring symptoms were produced by injection into the vitreous, but definite results followed intracorneal injection, though these were but slight; the results of injection into the anterior chamber were more marked than those of the intracorneal injection, but rapidly passed off.

3. Injection into the vitreous caused degenerative changes in the retina, in the pigment epithelium and in the choroid, which progressed on to atrophy.

4. The picture of intra-ocular anaphylaxis is quite different from that produced by infective endophthalmitis, in the absence of

marked inflammatory change or purulent exudate with consequent scar building and shrinking of the globe. The primary changes in intra-ocular anaphylaxis are those found in the retina, pigment epithelium, and choroid.

5. The results of the experiments lend no support to Elschnig's theory.

6. The difference between the process here described and that of sympathetic ophthalmia consists mainly in the absence of any symptom of plastic uveitis.

The paper is accompanied by a coloured plate illustrating the naked eye and ophthalmoscopic appearances noted in the text, and two plates of microscopic drawings of the changes found in the affected tissues. There is also a bibliography of the German literature on the subject.

E. E. H.

(4) **Woods, Alan C. (Philadelphia).—Ocular anaphylaxis: I. The reaction to perfusion with specific antigen (With three line illustrations in the text.)** *Arch. of Ophthal.*, Vol. XLV, No. 6, November, 1916.

(4) **Woods** undertook a number of experiments on dogs with the idea of ascertaining if anaphylactic phenomena could be elicited by antigen carried to the eye via the blood stream, in animals previously sensitized by intraperitoneal injection. He made a somewhat protracted study of the symptoms observed, and describes his apparatus and technique. The operations performed fall into three groups.—(1) The perfusion of normal dogs with defibrinated normal blood. (2) The perfusion of normal dogs with defibrinated normal blood to which antigen (horse serum and uveal extract) was added; and (3) the perfusion of sensitized dogs with specific antigen (horse serum-uveal extract). The dogs were sensitized from three to five weeks before perfusion by intraperitoneal injection. The following conclusions were arrived at:—(1) The eye can be sensitized by intraperitoneal injection, and anaphylactic phenomena can be elicited in it by antigen carried by the blood stream. (2) The anaphylactic phenomena consist in a primary contraction of the pupil, followed by a further gradual contraction, and in small extravasations of blood throughout the fundus. (3) The contraction of the pupil seems to be due to a reaction of the smooth muscle of the iris to the specific antigen in the perfusion fluid, and is in definite accord with the cellular theory of anaphylaxis.

R. H. ELLIOT.

(5) **Woods, Alan C. (Philadelphia).—A contribution to the anaphylactic theory of sympathetic ophthalmia.** *Arch. of Ophthal.*, Vol. XLVI, No. 1, p. 8.

(5) **Woods** first discusses the various theories of the pathogenesis of sympathetic ophthalmia, and states Elschnig's belief as follows:—

"The disintegrating uvea, or some portion thereof, in the exciting eye, is reabsorbed as antigen, and leads to a hypersensitiveness of the animal, and especially of the homologous tissue, in the uvea of the second eye. Further absorption of this disintegrating uvea (or of some constituent thereof) leads to an intoxication of the sensitized uvea of the second eye, which manifests itself clinically as an uveal inflammation." He points out that this theory explains the occurrence of the sympathetic inflammations, irrespective of whether the disorder in the exciting eye is bacterial or otherwise, and that it also accounts for the latent period of from two to six weeks between the onset of the disease in the exciting eye, and its outbreak in the sympathising eye, since the experimental animals develop their greatest sensitiveness at this period. The theory assumes that the uvea, or some part of it, can act as a foreign protein to the homologous animal, and furthermore that in so acting it possesses a distinct organ specificity. The experiments of Elschnig, Weichardt, Kummell and others are reviewed. The present experiments were undertaken to throw fresh light on the subject, the central idea being to simulate as closely as possible the conditions under which sympathetic ophthalmia occurs clinically ; to this end the eyes of sensitized animals were perfused with specific antigen. The steps of these experiments are given in some detail, and the following summary of the conclusions arrived at is furnished:—

(1) Homologous uvea has the power of acting as an antigen, and of producing an ocular hypersensitiveness.

(2) Homologous uvea possesses a strong organ specificity.

(3) Intra-ocular injection of a small amount of either homologous or heterologous uveal emulsion can produce a hypersensitiveness in the second eye.

(4) From the evidence to hand, it seems probable that the peculiar antigen properties of uveal emulsion are due to the pigment epithelium.

A liberal bibliography closes the paper. R. H. ELLIOT.

(6) **Woods, Alan C. (Philadelphia). — Ocular anaphylaxis. III. The rôle of uveal pigment.** *Arch. of Ophthal.*, Vol. XLVI, No. 4, p. 283, 1917.

(6) The following is **Wood's** summary of his paper on ocular anaphylaxis : "A pigment emulsion has been prepared from the uveal tract, which is suitable for use in perfusion. This pigment is a nitrogen, hydrogen, carbon, oxygen, iron, sulphur and phosphorous-containing body, and is either a protein or closely allied to proteins. Perfusion experiments proved that this pigment was the constituent of uveal tissue responsible for its peculiar antigenic properties. The pigment possesses antigenic properties, can act as antigen in the homologous animal, and is organ specific and not species specific.

These antigenic properties of pigment are those required if the anaphylactic theory of sympathetic ophthalmia is a possibility. The findings reported here confirm Elschnig's findings, and give a definite scientific basis to the anaphylactic theory of sympathetic ophthalmia.

R. H. ELLIOT.

IV.—RESTORATION OF THE BORDER OF THE EYELIDS

Duverger.—A procedure for effecting perfect restoration of the free border of the eyelids. (Procédé permettant la réfection exacte du bord libre des paupières.) *Arch. d'Ophtal.*, September-October, 1917.

Duverger, like many of his *confrères,* has had difficulty in restoring a divided lid margin without a small but disfiguring notch at the site of the wound or incision.

In this communication he describes a method he has adopted for about four years, which has proved highly satisfactory. It consists in splitting the eyelid on each side of the wound and resecting a triangular area, *cutaneous* on one side, *mucous* on the other; the two raw surfaces are then superimposed and retained in position by sutures.

The method of operating is most easily understood by means of the following diagrams:—

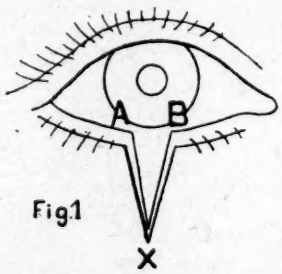

Fig 1

A X B (Fig. 1) represents a palpebral coloboma. If accidental, the edges are resected completely but sparingly.

With a narrow knife the free border of the lid is split on each side of the coloboma to a distance of 2, 3, or 4 millimetres, according to the extent of loss of lid and the amount left to deal with.

On the side A (Fig. 2) the skin is removed over the triangle A X A^1, taking care not to injure the subjacent mucous membrane. On the side B, an exactly similar area of mucous membrane B x B^1

is resected, avoiding all injury to the skin and taking care to preserve the cilia.

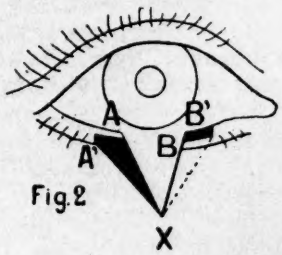

Fig. 2

There are now two triangular areas of the same shape and size with opposing raw surfaces. The B X B triangle is brought over A X A triangle and sutured. The first stitch should be inserted on the conjunctival surface at a point midway between the fornix and the lid margin, and tied on the conjunctival surface. The second and most important conjunctival stitch is at 1 mm. from the mucous lip of the free border; it approximates A & B^1, and should restore the lid margin accurately. The third stitch is on the skin surface, 1 mm. from the cutaneous lip of the free border, and unites A^1 & B. This having been inserted with accuracy, a few points of suture bring together the lower portion of the V.

When the operation is finished, there is on the free border of the eyelid a line of union in the form of *Z*, the antero-posterior branches being joined by a line parallel to the lid margin (Fig. 3).

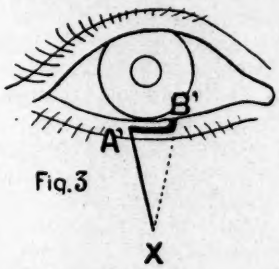

Fig. 3

The author has applied this procedure thirty to forty times, and is well satisfied with the results. Most of his cases have been recent war wounds.

He has also dealt with cases of senile ectropion by this plan, beginning with the production of a coloboma by a vertical cut with scissors about the middle of the lower lid. J. B. LAWFORD.

V.—VISUAL DISTURBANCES FROM HEAD CONCUSSION

Coutela.—Visual disturbances from head concussion. (Les troubles visuels par commotion cranienne.) *Arch. d'Ophtal.*, May-June, 1917.

Coutela commences his paper by pointing out the extreme difficulty of determining exactly what is meant by commotio cerebralis or cranialis, and gives the following unexpectedly wide definition of the class of case under consideration :—" visual disturbances of purely functional type, not showing the features of organic affections as at present recognized, and not corresponding to demonstrable macroscopical lesions, disturbances consecutive to a cranial traumatism, whatever its cause, whether it be the action of an explosive or of any contusion-producing body."

In a first group are placed cases of commotio from direct wounds of the head, where there is neighbouring or distant action on intra-cranial structures; in a second group are cases of commotio from the explosion of shells in the vicinity of the patient without the production of any outward sign of injury.

Clinically regarded, the symptoms are given by Coutela in three categories: (1) Transient, consisting of phosphenes, " stars," deformation of objects, uniocular diplopia, asthenopia of accommodation, etc., all of ocular origin, as opposed to central. (2) Persistent; here Coutela places photophobia and spasmodic myopia. (3) Amblyopia or blindness, and restriction of the visual fields. The blindness is at first absolute, but may improve very rapidly.

The question of differential diagnosis is lightly touched on; and there is a discussion of the importance of hysteria as a basis for certain of the cases included by the author, but no serious attempt to distinguish, visually speaking, between hysteria and commotio. In fact, most of the section on treatment is devoted to psychotherapy, as though the majority of his cases were hysterical. He declares, indeed, that " toujours à un moment donné, parfois très tôt après le traumatisme, il s'agit de psychonévrose."

S. A. K. WILSON.

VI.—NITRO-PHENOL NEURITIS

Sollier, Paul and Jousset, Xavier.—Nitro-phenol neuritis. (Névrites nitro-phenolées.) *La Clin. Ophtal.*, February, 1917.

In this interesting little article, **Sollier** and **Jousset** describe the neuritic affections which occur in powder makers who work, it must

be admitted from their description, under very slack hygienic supervision. They describe actually three cases, in two of which there seems to have been a very extensive neuritis of spinal nerves, as well as of the optic nerves. The third case is the one which they say is typical, so far as the present communication is concerned. To take their conclusions first, the authors say that among workers handling explosives neuritic troubles occur, with a frequent localization in the optic nerves. Here the characteristics are those of a toxic retrobulbar neuritis, which may go on to atrophy. This neuritis seems to be due to nitro-phenol bodies (*corps nitro-phenolés*) entering into the composition of the powders. It is suggested that blame is to be laid on the dilatation of blood-vessels produced by nitred products, and that the prophylactic administration of vaso-constrictor drugs might be tried. It is also suggested that better control of the hygienic conditions of the work is required.

The following is the authors' description of a typical case:—"After a time of work in the factory, which varies from six to twelve months, the patient has cramps and formication in the lower limbs, and notices a gradual diminution of vision, with transitory attacks of foggy vision, and he can no longer read. Perhaps it is several months before he seeks advice; the symptoms are always the same, namely, green-blindness, accommodative paresis or paralysis, diminution of central vision, concentric contraction of the visual field, sometimes with a central scotoma. At first, no fundus alterations are found, then comes an œdematous neuritis, and, lastly, a white atrophy. . . . ."

The authors deal with various possible causes, among which may be mentioned tobacco-alcohol assisted by the action of melinite, and tabes. Both of these are rejected, and dinitro-chloro-benzol is pretty definitely fixed upon as the toxic agent. Is the mechanism by cutaneous absorption, inhalation, ingestion? Perhaps they all contribute, but the theory of constant vaso-dilatation which interferes with nerve nutrition is the one favoured by the authors. If that is the case, then the administration of vaso-constrictor drugs like adrenalin ought to act as a prophylactic. As has been mentioned above, the authors call special attention to the want of care on the part of the workmen as regards the wearing of gloves, masks, goggles, etc., and the soiling of food with the hands.

ERNEST THOMSON.

VII.—ATROPHY OF THE IRIS

(1) **de Schweinitz, G. E. (Philadelphia).—Progressive essential atrophy of all layers of the iris.** *Trans. Amer. Ophthal. Soc.*, Vol. XIV, Part 1, 1915, p. 250.

(1) This handsomely illustrated communication by **de Schweinitz** describes one of those rare and curious cases where, without obvious cause, the iris undergoes progressive atrophy. The patient, a woman, aged 23 years, was under de Schweinitz's observation for two years, and the changes that took place in the iris during that period are beautifully shown in three water-colour sketches by Miss M. Washington. The author admits that the cause of the changes in the iris is still shrouded in mystery, although he throws out suggestions that certain factors, as a latent tuberculous infection, gastro-intestinal intoxication, or a fault in the secretion of the ductless glands, may have something to do with the matter. As regards the eye itself, it should be added, finally, that it was subject to slight rises in pressure and attacks of redness.

In the discussion that followed the reading of de Schweinitz's paper, cases of atrophy of the iris were mentioned by **Zentmayer***, of Philadelphia, **Mittendorf**, of New York, and **Risley**, of Philadelphia.

S. S.

(2) **Lane, Laura A. (Faribault, Minn.).—Primary progressive atrophy of the iris.** *Ophthal. Record*, June, 1917.

(2) **Lane** describes the case of a woman, aged 20 years, affected with primary progressive atrophy of the iris of one eye, the history of which had extended over two years. There was a family history of tuberculosis, and the patient suffered from persistent acne indurata of the face. The woman was under Lane's observation for about sixteen months. When first seen, V. was fingers at six inches, the tonometric reading was 56, and the iris was almost completely absorbed, nothing remaining except insignificant strands of tissue above and to the nasal and temporal sides. The affected eye was considerably smaller than the other one. When the patient had been under observation for about three months, pain and a sudden rise in intra-ocular pressure necessitated a trephining operation. A week later V. was 5/60. In about a month the tonometric reading was 20. Some six months after operation, the cornea was almost clear, V. was 3/60, and the Schiötz reading was 28, but absorption of the iris was still going on. A month later, no difference between the size of the two eyes was apparent.

S. S.

*See *Trans. College of Physicians Philadelphia*, third series, 1913, Vol. XXXV, p. 456.

VIII.—REMEDIES

(1) **Axenfeld, Küpferle, and Wiedersheim (Freiburg i. B.)—Glioma retinae and intra-ocular radio-therapy. (Glioma retinae und intraokulare Strahlentherapie.)** *Klin. Monatsbl. f. Augenheilk.*, Bd. LIV, 1915, p. 61.

(1) **Axenfeld** writes the clinical part of this communication. The first report was published in 1914 (*Klin. Monatsbl.*, Bd. LII, S. 426). The right eye of an eight months old child was removed for glioma in January, 1914, and the left eye was found to be already affected. At the same time the X-ray applications to the other eye were commenced under the control of ophthalmoscopic observations made from time to time under an anaesthetic. By November the tumour had become very much smaller and vision had evidently greatly improved as shown by the return of steady fixation. The general health of the child remained good, nor had any harmful effects appeared in other parts of the eye. The possibility of effects on the brain cells is also borne in mind. Axenfeld strongly advises that in every case of glioma retinae the second eye should be very carefully examined, under an anaesthetic if necessary. The disease is much more frequently bilateral from the beginning than transferred by metastasis from one eye to the other, and it is not impossible that the subsequently found growths in deeper parts are often similarly of independent origin. It is further to be recommended, following the proposal of Pusey, that every glioma enucleation, even the most early, should be followed by the exhibition of the X-rays. In conclusion, Axenfeld holds that blind gliomatous eyes should be excised, but that for commencing glioma in the still seeing eye, radiotherapy is not only justified, but obligatory, as also when enucleation is refused and for the later stages and for recurrences. Some experiments made by **Wiedersheim** on rabbits' eyes showed no changes of any note beyond a little conjunctivitis in the eyes submitted to X-rays.

The radio-therapeutic *technique* is described by **Küpferle.** From January to November 24 applications were made, usually over an area of 24 square centimetres, either at the side or the front of the orbit. An aluminium filter of 3 to 5 mm. was used, and the tube was placed 22 cm. from the skin. The time of application varied from 10 to 30 minutes, and the amount of surface-energy from 16 × to 30 × by Kienböck's measurement. Mesothorium was used twice for 12 and 15 hours respectively.

No finality is claimed for the favourable results obtained, but the authors are evidently enthusiastic, though with reserve. It must be remembered that these tumours sometimes undergo spontaneous involution, yet in view of the usually unsatisfactory outlook this

method seems worthy of a thorough trial. An excellent plate shows the changes in the retina at two stages during the treatment.

H. M. TRAQUAIR.

(2) **Elsberg, Charles A., and Krug, E. F. (New York City).—A case of hypopituitarism with homonymous hemianopsia (suprasellar cyst ?) completely relieved by glandular treatment.** *Arch. of Ophthal.*, Vol. XLVI, No. 2, p. 97.

(2) **Elsburg** and **Krug** consider, that in spite of the advances made in our knowledge of pituitary disease, the results of surgical treatment are still so unsatisfactory, that every case in which field defects of hypophyseal origin are present should be subjected to a thorough course of hypodermic treatment with glandular extracts, before it is decided to undertake any operative procedure for the relief of the condition. They publish full notes of their own patient, which are certainly sufficient to arrest attention. They believe that in some disordered states the pituitary body, accompanied by interference with secretory activity and cyst formation, glandular treatment may not only relieve the secretory deficiency, but also may cause secondary cysts to be absorbed.

R. H. ELLIOT.

(3) **Cuperus, N. J. (Zwolle, Holland).—Mesothorium treatment of eye diseases.** *Arch. of Ophthal.*, Vol. XLVI, No. 2, p. 126.

(3) The following are the conclusions which **Cuperus** arrives at, as a result of his experience with mesothorium. In many cases of eye disease, where the usual remedies fail, treatment with radium or mesothorium is favourable, particularly in chronic blepharitis and in chronic inflammations of the conjunctiva, cornea, iris or vitreous. The proper moment at which to begin treatment is when nothing further can be accomplished by the usual methods. In acute and painful keratitis or iritis, it is necessary to proceed with caution. The application of the remedy is sometimes followed by an unpleasant irritation, which may last for months, though permanent damage has never been observed. A short *résumé* of the history of the experience of others, with a bibliography, concludes the communication.

R. H. ELLIOT.

(4) **Koellner (Würtzburg).—Epithelial new formation of the corneal limbus, which recurred for five years, and was finally cured by mesothorium.** *Arch. of Ophthal.*, Vol. XLVI, No. 2, p. 130.

(4) One of the most interesting points in the case recorded by **Koellner** was the absence of immediate improvement after the tumour had been treated by mesothorium, and the remarkable disappearance of the growth which had taken place when the

patient was seen five months later. The case was one for which surgery could do nothing, and the cosmetic result was excellent.

R. H. ELLIOT.

(5) **de Schweinitz, G. E. and How, H. W. (Philadelphia).—A case of pituitary body disease, and the results of glandular administration.** *Arch. of Ophthal.*, Vol. XLVI, No. 2, p. 139.

(5) **de Schweinitz** and **How** draw attention to the variable results attained in the past by glandular therapy, and point out that this is due to the fact that such treatment is only indicated when there is glandular insufficiency. Moreover, since a pituitary body malady is a polyglandular one, the administration of extracts of glands other than the one primarily involved may be of service, notably the extract of the thyroid gland. Hence the value of combining pituitary and thyroid feeding, as is illustrated by the case report now presented. The patient conformed to none of the well-recognized types. The authors discuss the various signs and symptoms presented, and deal carefully with the visual field phenomena. They draw special attention to the fact that whilst the sight of one eye was steadily improving under treatment, that of the other was declining, and only began to rise at a later date. A similar condition of affairs is often observed during the treatment of specific interstitial keratitis.

R. H. ELLIOT.

(6) **Timme, Walter (New York).—Dyspituitarism with limitation of the visual fields; symptoms disappearing under the use of internal glandular therapy, with a return of the visual fields to normal.** *Arch. of Ophth.*, Vol. XLVI, No. 2, p. 151.

(6) The most interesting point in **Timme's** case was the wide range of glandular therapy covered by the treatment before the excellent final results were obtained. Pituitary extract, thyroid extract, adrenalin solution, and later suprarenal gland were all administered, whilst corpus luteum extract was given for diagnostic purposes.

R. H. ELLIOT.

(7) **McKee, Lt.-Col., C.A.M.C., and Courtenay, Capt., C.A.M.C.—Cases of syphilis of the eye following treatment by salvarsan.** *Canadian Med. Assoc. Jl.*, November, 1916.

(8) **Darier, A. (Paris).—Colloidal mercury, colloidal iodide, intramine and sulphur as substitutes for the arseno-benzols in the treatment of syphilis. (Mercure colloïdal, iode colloïdal, intramine et soufre colloïdal, pour remplacer les arsénobenzols dans le traitement de la syphilis.)** *La Clin. Ophtal.*, April, 1917.

(8) The two pages occupied by **Darier** constitute not so much an article of his own as an introduction to the article by McDonagh,

of the London Lock Hospital, which appeared in the *Lancet* for June 16, 1917, and which is reproduced *in extenso* in this number of our French contemporary. Darier has found McDonagh's treatment, in anything like his doses, so intensely painful that he and others have had to give it up. Nevertheless, the treatment is considered to be of such interest and importance to French readers that the *Lancet* article has been translated into their language.

ERNEST THOMSON.

(9) **George, Edgar J., and Toren, Julius A. (Chicago).—An ocular therapeutic lamp.** *Ophthal. Record*, May, 1917.

(9) **George** and **Toren** describe their leucodescent or therapeutic lamp in the treatment of corneal ulcers, iritis, episcleritis, and ciliary neuralgia.

The lamp consists of an aluminium parabolic reflector containing a 50-Watt electric light with a violet glass globe. The lamp is mounted on an adjustable stand with an adjustable face rest. The lamp and face must be adjusted so that the cornea is 60 mm. from the front of the bulb (which is the focal distance of the reflector and will give a temperature of 170°F. in 15 minutes), and must be accurately centered; 170°F. was found to be the most effective temperature for the ocular diseases mentioned. This degree of heat can only be tolerated by using the violet glass globe. The minimum thermal death-point for the staphylococcus is 149°F. for 15 minutes; 158°F. for 10 minutes; and 176°F. for 5 minutes. For the streptococcus it is 129°F. for 15 minutes and 113°F. for 15 minutes for the pneumococcus.

The patient looks directly and constantly at the centre of the bulb with wide-open eye, but the lid is lowered at intervals to permit moistening of the eye. When the lamp is properly placed and adjusted the patients can take their own treatment. In cases of recent injury this form of treatment should be used as a prophylactic against infection.

J. JAMESON EVANS.

BOOK NOTICES

Malingering; or, the Simulation of Disease, by A. BASSETT JONES and J. LLEWELLYN LLEWELLYN; **with a chapter on Malingering in relation to the Eye,** by W. M. BEAUMONT. Pp. 708. Price 25s. London: William Heinemann. 1917.

Jones and Llewellyn have had considerable experience in the greatly increased legal work due to recent legislation of the type of

the Workmen's Compensation Act, and are well qualified to deal with the subject of malingering. Now that conscription is in operation in this country, malingering has become very important from a military point of view. A very common form of malingering consists in the simulation of defective vision, and the authors have wisely arranged to have a special chapter written on this subject by an ophthalmic surgeon, W. M. Beaumont, of Bath, who has previously published a book on injuries of the eyes of the employed. This chapter occupies 91 pages and goes very fully into all the methods of detecting malingering and differentiating it from hysteria and real disease. Some of the tests may seem to the skilled observer superfluous, but it must be remembered that the evidence of malingering must be made clear and definite to a sufficient extent to convince others who have no special training and that nothing brings more discredit on the surgeon than an unwarranted diagnosis of malingering, to say nothing of the injustice that may follow to the unfortunate sufferer. In military work in connection with the classification of the soldier under the present British scheme, it will be found that a considerable number of men have found out that a visual acuity of less than 6/12 may be regarded as a passport to a safe job; thus the simulation chiefly found is an exaggeration of a natural defect, such as a moderate degree of myopia, and a refusal to admit any improvement up to that pitch even when correcting glasses are worn. It is not so easy to detect such cases, and in many the surgeon must be content to rely on his own observations as to the integrity of the fundus, the absence of symptoms of toxic amblyopia, etc. Beaumont rightly lays stress on the careful examination of the recruit in view to future claims for damage. He states: "The congenitally blind eye is one of the most prolific sources of ocular malingering. Even in the Army we often meet with binocular men with monocular sight, and in reply to our suggestion that the loss of function is not of recent inception, we are told that the eye must have been lost subsequently to enlistment, or they would not have been enrolled."

The simulation of night-blindness has given trouble of late. In a certain number of patients it is present as a congenital defect. The conditions of modern trench warfare are also responsible for fresh cases and increase in the congenital cases. A clever malingerer finds it an easy complaint to simulate, and one the simulation of which is by no means easy to detect. A test suggested by Beaumont is carried out by means of an Edridge-Green lantern. The patient sits with his back to the lantern holding a sheet of white note paper in his hand, in such a way that the light falls upon it through the smallest perforation of the diaphragm of the lamp with an opaque glass in front of it. The perforation is increased in size until the paper is sufficiently illuminated for the

patient to see it. The size of the perforation is noted, and then reversed examination is made, beginning with a full light, which is gradually reduced until the paper is no longer seen. Quantitative variations in the test may be made by removing the opaque glass. A note is made of the results, and the patient told to return on the following day, when a repetition of the test is made. The variations on the two days will be inappreciable in night-blindness, but extensive in malingering.

The whole article is full of suggestive hints on this most difficult subject and deserves careful reading. The only objection we can see in reprinting Beaumont's article by itself, for the use of ophthalmic surgeons, is that other articles in the book, notably those on pain and hysteria, require to be read with it. As a criticism, we would suggest that a little condensation would be advisable.

E. E. H.

Ophtalmologie du Médecin Praticien. (Ophthalmology for the General Practitioner.) Par ALBERT TERSON. Paris VI^{e}: Masson et Cie., 120 Boulevard St. Germain. 1916. Price 12 francs.

The object of this text-book of ophthalmology is to teach the general practitioner who has had no practical experience in an eye clinic, how to treat and to recognize some of the common diseases of the eye. The author points out that the family medical man cannot always escape giving an opinion upon a diseased eye, even if it be only to decide whether a specialist should be called in or not; if he has no knowledge of the subject, he will be liable to injure his reputation. We are inclined to think that, in this country at any rate, more reputations are lost by the possession of that dangerous "little knowledge" than by a confession of complete ignorance. The public to-day does not expect a general practitioner to be a specialist, and greatly prefers to be referred to an expert.

But if the general practitioner wish to acquire a working knowledge of eye diseases—and many succeed in their desire—there is only one way to act; he must work in an eye clinic regularly for a year or two. It is quite impossible to get a grasp of any clinical subject without personal contact with the patients.

What knowledge of diseases of the eye should a general practitioner possess? In the first place, he should learn sufficient of the use of the ophthalmoscope to enable him to employ it in his daily work, to assist in the diagnosis of general disease. A physician who cannot diagnose optic neuritis and albuminuric retinitis, is as badly handicapped as one who cannot hear a heart

murmur. The ophthalmoscope is as essential as the stethoscope in the diagnosis of systemic disease. Secondly, the general practitioner ought to be able to recognize that an eye is so affected as to call for the attention of a specialist. Above all things, let him be instructed that vomiting and general malaise may be signs of acute glaucoma. All this should be taught to students, and no diploma should be issued to a man who has not this knowledge.

There are many details which could be criticized in the book, but it seems sufficient to point out the difficulty of teaching without practical experience.

We are at a loss to understand the objection the author has to the use of atropin in ulcers of the cornea. He cautions the reader against atropin, unless there be severe iritis. We are apt to regard this drug as the sheet-anchor of our treatment, and omit it only in the case of patients with a tendency to glaucoma.

No practical details are given for testing colour vision, and yet we should have thought that this was often the duty of a general practitioner who holds a railway appointment. Stilling's test and Holmgren's wools are mentioned, but not a word of caution is given as to the errors likely to be made with these tests. The colour perception lantern is not mentioned.

The use of three or four founts of type on each page is very teasing, and the illustrations are poor in comparison with those found in English and American books.

T. HARRISON BUTLER.

The American Encyclopedia and Dictionary of Ophthalmology. Edited by CASEY A. WOOD, M.D., C.M., D.C.L., assisted by a large staff of collaborators. Volume X.—Lenicet to Muscles. Chicago: Cleveland Press. 1917.

Much as one would like to review in some detail the various important articles in this tenth volume of the "American Encyclopedia," which contains such subjects as lens and lenses (200 pages or thereby), life insurance and ophthalmology, light, localization of foreign bodies, magnet, ocular muscles, and others; yet at the present moment all these are overshadowed in importance by the article on military surgery of the eye by Lloyd Mills, of Los Angeles. The author has had the initial advantage of being at the time of his writing a neutral and has had access to German and Austrian literature; further, he was in the Austrian medical service. The result is an article in which through the combination of personal experience with literary talent we have an up-to-date summary of ocular, and to a large extent, of cerebral military surgery. It is probable that no other single article of equal comprehensiveness is to be found in the English language.

The author commences by showing statistically the great increase in the proportion of killed to wounded in this war as compared with previous wars, and the similar increase of head and eye injuries. These unfortunate results are due not only to the increased power of armament, but also to the development of trench warfare. In the Chino-Japanese war of 1894 eye injuries formed 1.2 per cent. of all wounds, whereas in the present conflict it seems probable that Uhthoff's estimate of 8 per cent. will be nearly correct. The degree of prevention by metal helmets remains to be determined. Looking to the very large amount of blindness in previous wars from immediate enucleation or, alternatively, sympathetic ophthalmitis, the establishment of specialist centres and of skilled ophthalmologists "have proven of incalculable value in terms of vision and of life." The mere covering of bulbar wounds by a conjunctival flap has saved numerous eyes. *A propos*, there follows a section giving instruction in first aid (ocular) to military surgeons. One notes the omission of tabloid drugs from the equipment. From this the author passes on to the consideration of the conditions of employment of shrapnel, shells and bullets, the mechanism of their action, their characteristic effects upon the tissues of the head, and the general principles of the treatment of military wounds. In this last connection, and basing on "solidly established facts," Mills goes rather closely into the question of the use of antiseptic solutions which has been brought into such prominence by the researches of Sir Almroth Wright, Carrel, Dakin and others; precise directions for the making up of such solutions (Dakin's solution), are given. When ready for use Dakin's solution contains 0·5 per cent. of sodium hypochlorite with small amounts of neutral soda salts, and is practically isotonic with serum.

Wounds of the optic apparatus are no exceptions to the routine injection of prophylactic doses of antitetanic serum, usually 1,500 units subcutaneously. Gas bacillus infection of the orbital regions is rare. Most of the cases succumb in spite of free multiple incisions, the cause of death being meningeal complications.

A regional classification of the battle wounds of the optic apparatus follows. It is necessarily inexact, the author points out, because uncomplicated injuries of the eyes and optic apparatus are exceptional. A few points may be noticed.

Complete loss of the upper lid practically always means loss of the eye, even though this is uninjured, "although the use of a pedicled flap, backed with a conjunctival transplant from the eye of a recently killed donor and sutured temporarily to the lower lid, offers some slight chance of saving the eye; or, in many cases it will at least support a prothesis."

Injuries of the lacrymal sac usually result in suppuration before they can be treated, and the sac must be excised, but if early

treatment is possible, suture of the mucous membrane and skin in front of a hard rubber sound through the canaliculus and severed ends of the duct usually gives a patent duct. In injuries of the canaliculus Elschnig passes a fine hard rubber sound through the canaliculus from the punctum to the sac after silk sutures have been placed both on the conjunctival and skin surfaces of the injured lid. The sound is cut off an inch from the punctum and left in place for seven days with vaselined gauze between lid and sound.

Death from infection by the streptococcus, and rarely from B. perfringens or B. tetanus, not infrequently follows crushing injuries of the bony orbit unless the dead, contused tissue is freely cut away, foreign bodies are removed and drainage is provided by gauze wicks wet with sodium hypochlorite solution. Such dressings must on no account be waterproofed, and must be frequently changed. All such cases receive antitetanic serum and a mixed vaccine with streptococcus predominating. Morestin details the successful treatment of a number of cases of traumatic defect of the upper orbital arches, as well as of frontal and other skull depressions or defects, by implanting or grafting the costal cartilages of the sixth, seventh and eighth ribs, trimmed to the required shape, the graft "taking" even when not autogenous.

It is pointed out that in bullet wounds through the orbit behind an intact anterior segment of the eye choroidal and retinal ruptures of types not usually seen in civil practice may exist. The typical concentric rupture is rare. The case is reported by Fleischer of a soldier who felt a blow on his head which caused his helmet to fall forward. The right eyeball lay in the hollow of the helmet, unruptured. A bullet had entered in front of the left ear and emerged in front of the right external canthus, leaving the bulbar conjunctiva as smoothly divided as though an ideal enucleation had been performed. Contrariwise, in bullet injury of the orbit the optic nerve is not always directly injured though the eye may be blind for the time being, due to concussion or contusion of the nerve, or to inflammatory reaction about the nerve.

Indirect injuries of the eyeball made up over 6 per cent. of all battle injuries of the eyes in present-day warfare. These are placed in two groups, namely (1) those which are purely the result of air contusion or air decompression, consequent upon the bursting of high explosive shells in the near neighbourhood, and (2) those in which the ocular coats have been injured by contusion, penetration or perforation of the orbital cone by projectile or other injury, with no possibility of contusion of the globe. Numerous examples are detailed. Retinal detachment forms a large proportion of such indirect injuries. In these cases there is usually no pain referred to the eye, which nearly always retains its normal external appearance.

Discovery of the blindness, the other eye being sound, is generally accidental.

The author goes closely into the details of direct injuries of the eyes by bullets, by artillery projectiles and by the very numerous secondary missiles such as mud, dust, sand, gravel, fragments of rock, splinters of wood, metal and glass, and so on. There is a special paragraph on the subject of conjunctival flaps. "In all perforating wounds of the anterior segment of the eye the first indication is to close the wound and to protect the eye against infection by covering the wound with a conjunctival flap after as thorough a conjunctival toilet as possible." Cords says that "the living conjunctiva is the best antiseptic and the best antisepsis, and provided with such a bandage, the wounded soldier can be safely transported, reaching a specialist within a few days at the most and in time for enucleation should purulent inflammation have begun." Bahr recommends painting all the wounded tissues of the face, the lids and the anterior segment of the globe, with full strength tincture of iodine as the first treatment. Though this is done under thorough cocainization the resulting pain is severe and persistent, but infection is usually avoided so far as this has not taken place at the time of injury.

In dealing with traumatic cataract the author considers that in unskilled hands the only justifiable treatment is the immediate use of a conjunctival covering and dispatch of the patient to the specialist centre. He refers to the well-known view of Valude that soldiers suffering from traumatic cataract of one eye should not be operated on when the remaining eye is sound.

It is noteworthy that foreign bodies of the cornea or conjunctiva frequently produce the gravest consequences (Terrien), this being due to commotio oculi. Terrien believes that inflammatory, sensorial and nervous disorders occurring in these cases are part of a single "hystero-traumatic entity" or syndrome, in which the idea of simulation has no rightful existence. Foreign particles are not found in all these cases to explain the syndrome on the basis of direct mechanical trauma.

The subject of intra-ocular foreign bodies has been discussed so recently in this country—and indeed the opinions of British authors are here mentioned—that little reference to this need be made. It is interesting, nevertheless, to note some paragraphs which the author of this article has thought necessary to italicize. (1) "No intra-ocular search for a foreign body is justifiable without a careful Röntgenographic study of the eye and orbit from different angles." (2) "The presence of one or more small foreign bodies in the eye does not mean, of necessity, the loss of the eye or great reduction in its vision." (3) "The enormous experience of this war seems to show that the presence of any kind of a sterile foreign

body in the eye has no relation to the production of sympathetic ophthalmitis. As a result of this war there are literally thousands of men going about with apparently innocuous particles of metal and of various forms of rock in one or both eyes, and with useful vision ranging up to 6/9 or even better."

The rules for the prophylactic enucleation of wounded eyes seem to be very much the same as those referred to by British writers, and Lister's method of leaving a cuff of sclera is highly recommended.

In cases of unilateral traumatic exophthalmos which survive, in which the line of perforation is so clearly within the orbit as to exclude the possibility of arterio-venous aneurism in the cavernous sinus or other post-orbital lesions, the orbit should be incised and the cavity of the hematoma freed of clot and drained in order to anticipate the infection which so commonly follows localized orbital hæmorrhage.

A long section deals with lesions of the upper cranial nerves, and with those of the sympathetic in the neck, after which attention is focussed on concussion, blindness, and shell shock. The greater part of the literature quoted on the last-named subject is British, and further reference will not therefore be made here.

Among the ocular disorders largely or wholly evoked by physical and nervous exhaustion military night-blindness has been reported by a number of observers. Zade calls attention to the effect of actively military service in seriously reducing the visual acuity of men with uncorrected or imperfectly corrected anomalies of refraction, while Wietfeldt believes that the lack of vitamines in the food may be a factor in causing night-blindness.

The first part of the next section refers mainly to points in the treatment of cranial wounds as such and may be omitted here. The second part deals with the relations of projectile injuries of the skull and brain to the eyes. These relations "are established especially through increased intracranial pressure from many sources, through actual destruction of or injury to the visual cortical centres or the visual pathways and through local and general meningeal or encephalic infection. The ocular expressions of these injuries appear in the form of papilloedema and optic neuritis of all grades: muscular pareses, paralysis and conjugate deviations; and defect phenomena in the visual fields, ranging from total binocular blindness to tiny unilateral relative scotomata." This subject is then elaborated: one or two points only may be noticed. Progressive optic neuritis is a grave sign, the progress and not the mere fact of its existence being the important point. According to Adams, papillitis is not an indication for operation. The cases are not comparable with brain tumour. The change in the optic nerve simply means that something is wrong with the brain.

To the quotation from Adams the writer of the article adds in italics, "If, therefore, no other symptom furnishes an indication for trephining, that of choked disc alone should not be an indication for opening the skull." The author produces evidence from various writers that it is a safe rule that all projectile wounds of the skull be kept under occasional observation for many months, as late infections are apt to occur.

Injuries of the frontal lobes are next dealt with, such war injuries forming no exception to the rule that greater liberties can be taken with this than with other parts of the brain. Eight cases of nystagmus recorded by Noehte after injury of the foot of the second frontal convolution are given in some detail and the conclusion reached that in these cases there was no uniform relation between the side of injury and the direction of ocular movement. Noehte believes that each centre consists of several parts, lesions of which lead to right or left nystagmus, or the combined involvement of which produces nystagmus in all directions. Certain ocular palsies resulting from wounds of the sinuses and especially of the superior longitudinal sinus, are then discussed.

Some dozen pages are required to deal with the important subject of injuries of the occipital region and the resulting ocular symptoms, central blindness "and all manner of permanent and transitory defects in the visual fields." This must be studied in the original: an abstract could do no justice to the cases recorded. One may draw special attention to the case of bilateral motor apraxia with disturbance of visual orientation reported by Smith and Holmes as following the passage of a twelve millimetre shrapnel bullet through the skull and brain, involving the supramarginal gyri.

From the section on ocular disorders and injuries of aviation one gains some slight idea of the frightful visual strain thrown on aviators. The following sections deal with "ocular diseases or recrudescences of old general and ocular diseases" occurring in warfare, such as might be expected to follow similar strain or exposure in civil pursuits or avocations; and with malingering. In the former group epidemic nephritis finds a place, and the work of Foster Moore, Abercrombie and Jessop is referred to.

The final section deals with the relationship of visual acuity to military efficiency. The table, published in the *Lancet*, by Paterson and Traquair is reproduced and their work freely acknowledged. In discussing the disabling effect of Miners' nystagmus the British work by Ormond and by Harford is the source of information. Regarding the totally blind the author says that "the efforts of the Germans along this line are worthy of serious emulation in all countries, with due regard, of course, to the prevailing standards of living." The last few paragraphs deal with the training of those

blinded in war. It is unfortunate that no account of St. Dunstan's Hostel has been included.

ERNEST THOMSON.

CORRESPONDENCE

Atropin in Cataract Extraction

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,—In the course of reading the proofs of the December number of the BRITISH JOURNAL OF OPHTHALMOLOGY, I was interested in Mr. Fisher's advocacy of the use of atropin in cataract extraction. But surely, Sir, this is nothing new. It was done habitually by some of the best-known Continental operators, notably by Axenfeld, and by Hess, of Munich. I have seen both these surgeons operate with the atropin-dilated pupil. The following is a transcript of my notes taken at the time:—(1) "Extraction of cataract in a young adult by Axenfeld. Axenfeld has the pupil dilated either with homatropin an hour before, or with scopolamin two days before operation. (2) Hess. Extraction of senile cataract. The pupil has been dilated with atropin, one drop of 1 per cent. the night before and one drop on the morning of operation. The pupil is therefore fully dilated." The operative details were also given in my articles on Continental clinics, ***Ophthalmoscope***, 1912. It is true that Fisher uses the atropin when the patient is on the table, and that more of the alkaloid may thus enter the eye, but the principle seems exactly the same as that employed in 1911 by the two surgeons named. Hess was at that time in Würzburg.

Yours etc.,

ERNEST THOMSON.

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,

I think Mr. Fisher's note on cataract extraction in this month's issue of your Journal should not pass unnoticed.

There appears to be little that is new under the sun, and it may interest Mr. Fisher to hear that Lieut.-Col. Drake-Brockman told me at the International Ophthalmological Congress at Lucerne, some few years ago, that he systematically dilated the pupil before cataract extraction, that I myself do the same thing, and that Mr. Stanford Morton has for many years dropped a solution of atropin into the eye immediately after extraction: probably many others use it before or after in the same way.

Col. Drake-Brockman was wont to lacerate the capsule with a needle as a first step in extraction, and for this purpose a dilated pupil was necessary; moreover, he considered the section was easier with a dilated pupil and that the iris was not so liable to fall over the edge of the knife.

Mr. Stanford Morton applies the mydriatic immediately after the operation to get rapid and full dilatation of the pupil and to check any tendency to iritis, and to lessen the risk of prolapse of the iris.

I apply a mydriatic the night before or the morning of the operation, and, as I practically now always aim at performing a simple extraction, I do it chiefly for three reasons:

(*a*) The iris is more out of the way and less likely to fall over the edge of the knife.

(*b*) The escape of the lens through a dilated pupil—or one that has been quite recently dilated—is facilitated.

(*c*) I consider the pupil, which remains usually considerably dilated, is less likely to be followed by prolapse of the iris and by inflammation thereof.

Some years ago, I was in the habit of using eserin immediately after the extraction to keep the pupil contracted and lessen the risk of iris prolapse, but I have for some time come to the conclusion that a contracted pupil is more likely to cause prolapse than the opposite, and for this reason: take a recent simple cataract extraction, let the iris go back nicely into position and let the wound ***slowly*** leak—failing to heal—for several days; the iris does not prolapse. Let that wound heal weakly and retain the aqueous and let the pupil be contracted, a sudden effort or squeeze on the part of the patient bursts open the wound more or less and the aqueous in the posterior chamber will carry the iris with a rush into the wound, whereas, if the pupil was dilated, there would be very little posterior chamber and the fluid would flow in ***front*** of the iris and out through the wound with much less risk of causing prolapse.

Mr. Fisher's practice is undoubtedly a good one, but, to my mind, his practice is better than his theory. He says, page 751, "obviously, when the atropin solution is dropped into the conjunctival sac and the section immediately proceeded with, the alkaloid in considerable strength must make its way into contact with the iris, etc. etc."

But, Sir, is this so? In the cases I operate on, the section is attended by an escape of aqueous, which, presumably, rather tends to wash away any fluid in the conjunctival sac than aid and abet its getting into contact with the iris.

Isn't it more likely that the absorbing power is greatly increased by the full exposure of the absorbing surface after the introduction of the speculum, especially preceded by the action of cocain and adrenalin instilled for several minutes before?

One more point in Mr. Fisher's note I would fain allude to, and I could write pages on it; he says he quite rarely performs a simple extraction: what joy he misses!

I hope some day he will join the band of simple extractors, amongst them, in the past such masters as Charles Bell Taylor—*facile princeps* as an operator—and Charles Bader, and, amongst the present, Charles Higgens, Richardson Cross and—not least—Stanford Morton, *cum multis aliis*.

What more beautiful result than a perfect simple extraction! "*Ars est celare artem*," as Bell Taylor used to put it.

Apart from the cosmetic gain, look at the advantages of simple extraction:

(1) Scarcely any pain during and much less after the operation.

(2) Fewer instruments introduced into the eye.

(3) Much less bleeding.

(4) Much less risk of prolapse of vitreous.

(5) Practically no risk of capsule being drawn up into the wound months after the operation with secondary glaucoma resulting.

(6) When needling capsule, a more limited opening suffices in the pupillary area, with less risk of vitreous coming forward and blocking the filtration area, and so causing increased tension—often so difficult to treat.

(7) If anything, the vision is rather better after simple extraction and there is less spherical aberration and less complaint of glare. *Per contra*, the chief disadvantages of simple extraction are:

(i) The bugbear of iris prolapse: well, if it happens, it can be snipped off, but it doesn't often happen, certainly not sufficiently often to counterbalance the advantages; moreover, the combined operation is not entirely free from the risk of prolapse.

(ii) A difficulty in getting rid of soft cortex. This is readily overcome by washing out the anterior chamber with warm sterilized saline solution, only this must be most carefully prepared. I personally weigh the saline and attend to the disinfection of the undine and tube and also—a very important point—to the temperature of the solution used. I get it ready myself before the extraction, but only use it when necessary, not systematically.

Finally, Sir, how few really good operators one sees! As in a shooting field one sees a lot of fair shots, but seldom a really good one, so with ophthalmic operations.

Ought we to be satisfied with mediocrity in anything? Ought we not to go on striving and struggling to improve and eventually to "rise on our dead selves to higher things."?

Yours, etc.,

S. JOHNSON TAYLOR.

NORWICH.
December 14, 1917.

Visual Standards for the British Army

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,—In the January number of the BRITISH JOURNAL OF OPHTHALMOLOGY appears a Report of the Committee appointed by the Council of the Ophthalmological Society to consider "The Standards of Vision desirable for the performance of different duties in the British Army." It is stated that "this report will be presented at the next meeting of the Society in May, 1918, and will then be open to discussion."

As there is no likelihood of my being free to attend that meeting, a small criticism may now perhaps be permitted.

At page 37 it is suggested that the standard of vision for general service should be :—

"At least 6/24 with either right or left eye without glasses, and at least 6/12 with the right eye, aided, if necessary, by glasses." "The strength of the correcting lens in the case of sphericals should not exceed 8 D., of simple cylindricals 4 D., and of the highest meridian in combined sphero-cylindricals 8 D." This suggestion means that, if the left eye has an acuity of at least 6/24 without glasses, and if the right eye can be improved to 6/12 with the strength of lenses allowed, such a case is fit for general service, or Grade I with glasses.

The following two cases, which were examined, under the dates given, at a Medical Recruiting Board, will demonstrate that this suggestion, if not altogether wrong, should, at all events, be differently expressed :—

I. June 23, 1917. T. B. H., farmer, aged 26 years. R.V. = 3/60, with — 6 D. Sph.=6/9. L.V.=6/6 partly.

NOTE.—Right eye is divergent; not a suitable case for spectacle classification or grading; no binocular vision. But according to the above suggestion, this recruit should be put in Grade I with glasses which are "necessary" to obtain the standard for the right eye.

II. July 2, 1917. W. R., shipowner, aged 44 years. R.V.= 4/60, with — 4 D. Sph.=6/6. L.V.=6/6.

NOTE.—This man's eyesight gives him Grade I with glasses, which, however, he would probably be unable to wear.

The only alternative interpretation of the suggested standard is to consider glasses unnecessary in these two cases, and adopt the view that it is intended to accept left-eyed men for general service. If this be so, then the wording of the standard should be remodelled, and should be much more clearly expressed.

The same criticism in proportionate degree, applies to suggestion

III, page 37—the proposed standard for garrison duty at home or abroad.

Yours, etc.,

A. R. GALLOWAY, M.B., C.M., M.A.

250, UNION STREET, ABERDEEN.
January 3, 1918.

The Collective Treatment of Ophthalmia

The Editor THE BRITISH JOURNAL OF OPHTHALMOLOGY.

SIR,—I have read with interest in your December number a note on the collective treatment of cases of ophthalmia neonatorum, with a description of the steps that are being taken at the present time to make provision for such treatment in London.

Two points are emphasized:—First—to avoid separating mother and baby. Second—to have on the staff physicians who are well versed in the care of women who have been recently confined. May I put before you the experience of the Massachusetts Charitable Eye and Ear Infirmary of Boston, U.S.A.? This institution for some years past, sixteen according to my recollection, has maintained a special building for contagious cases. Here, about one hundred and twenty-five cases of ophthalmia neonatorum are treated each year. When it is possible for the mother to leave her home, she is encouraged to enter the hospital with her baby. However, in many instances, among the poorer classes, it is impossible for the mother to leave her home, but we are nearly always able to induce her to visit the hospital, two or even three times daily, for the purpose of nursing her baby, if she does not live too far away. When the mother lives at too great a distance to make visits to the hospital possible, we have often been able to have her milk drawn from the breast and sent to the hospital each day.

I should state that all these cases are visited by workers from our Social Service Department, who explain to the family the exigencies of the case and arrange the necessary details in the home.

In regard to your statement that there should be on the staff physicians skilled in the management of women recently delivered, I presume this includes skill in the care and feeding of infants as well. You, yourself, Mr. Editor, have pointed out that a considerable percentage of infants affected with ophthalmia neonatorum are weak and puny. Our experience has led us to place all our cases of this disease under the daily supervision of an expert paediatrician. Before adopting this course our mortality had been unduly high.

Now it compares very favourably with the normal infant mortality of our healthiest cities.

Yours, etc.,

GEORGE S. DERBY,
Captain M.O.R.C., U.S.A.

U.S. ARMY BASE HOSPITAL, No. 5,
(No. 13, GENERAL HOSPITAL), A.P.O, 3,
B.E.F., FRANCE, *December* 7, 1917.

NOTES

Deaths

WITH reference to the notice of Professor George Stanculeanu's death published in the December number we have received a letter from his widow giving further particulars of his career. He was born in Roumania in June, 1874, and graduated in Paris. In 1908 he was appointed professor in the University of Bucarest. He died at a sanatorium at Stamford, Conn., on July 15 last. His object in visiting America was to enlist sympathy, especially from medical circles, for stricken Roumania. Many American ophthalmologists, who had visited his clinic in Bucarest, showed deep sympathy with him and his cause. A few days after landing in America he suffered from a complete nervous breakdown. That, however, did not deter him (and Madame Stanculeanu) from conducting a lecturing tour in the States, the unhappy sequel of which we now deplore. His widow continues the good work in America. It should be added that the late Professor was a member of the Oxford Ophthalmological Congress, the meetings of which he attended on several occasions.

We regret to announce the death of Annie Thompson Barnard from pneumonia. She was keenly interested in ophthalmology, and for several years was clinical assistant at the Royal Eye Hospital, Southwark.

The deaths are announced of the following American ophthalmic surgeons:—

C. F. Beardsley, Ottawa, Ohio, aged 82; H. G. Jones, Utica, N.Y., aged 59; W. L. Jerkins, Moultrie, Ga., aged 46; F. Cornwall, San Francisco, aged 71; R. M. Richardson, Chattanooga, Tenn., aged 33.

The death is announced of Professor Raehlmann, known for his work on trachoma, retinal arterio-sclerosis, and the colour-sense.

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Appointments

ARTHUR F. MACCALLAN has been appointed Officer of the Most Excellent Order of the British Empire.

Professor St. Bernheimer, of Innsbruck, has been nominated to succeed Professor Ernst Fuchs, in Vienna. Fuchs (who is in good health) will devote his leisure to research work.

Dr. Gourfein has been appointed successor to the late Professor Haltenhoff, of Geneva.

Dr. L. C. Peter has been appointed professor of ophthalmology in Temple University, Philadelphia, to fill the vacancy caused by the death of Wendell Reber.

Lieut.-Col. E. S. Ryerson has been appointed A.D.M.S. of the Toronto Military District, in succession to Col. Marlow.

Dr. D. J. Gibb Wishart, ophthalmic surgeon, of Toronto, has been elected President of the Toronto Academy of Medicine.

Lieut.-Col. R. H. Elliot, I.M.S. (retired) has been elected a member of the Council of the British Medical Association, to represent the Indian Medical Committee, and Chairman of the Naval and Military Committee of the Association.

Mr. D. V. Giri has been appointed ophthalmic surgeon to the Eastbourne Eye Infirmary.

The following are the office-bearers for 1918 of the Ophthalmological Society of Egypt:— *President*, Dr. Oulton; *Vice-President*, Dr. M. Sobhy; *Treasurer*, Mr. A. F. McCallan; *Hon. Secretary*, Dr. S. Abdel Hameed Sulaiman; and *Assistant Hon. Secretary*, Dr. Mohd. Tewfik Sadick.

The following officers of the American Ophthalmological Society have been elected for 1918:—*President*, Dr. William H. Wilder (Chicago); *Vice-President*, Dr. Lucien Howe (Buffalo); *Secretary-Treasurer*, Dr. William M. Sweet (Philadelphia); and *Council*, Drs. A. Quackenboss (Boston), A. Knapp (New York), W. Zentmayer (Philadelphia), C. F. Clark (Columbus), and C. D. Wescott (Chicago).

The next meeting of the Society will be held on July 9 and 10, 1918, at Eastern Point, New London, Conn.

The following officers have been appointed by the American Academy of Ophthalmology and Oto-Laryngology:—*President*,

Dr. W. Y. Dayton; *Vice-Presidents*, Drs. E. Stieren, A. C. Magruder, and J. Green; *Treasurer*, Dr. S. Large; *Secretary*, Dr.L. M. Francis.

Dr. J. Milton Griscom has been appointed surgeon to the Wills Eye Hospital, Philadelphia, in succession to Dr. S. D. Risley.

Professor Majewski has succeeded the late Professor Wicherkiewicz in the chair of ophthalmology in the University of Cracow.

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Blindness in the Newborn

AT the annual meeting of the Canadian Medical Association, held in Montreal in June last, blindness in the newborn was discussed by the section of Gynaecology and Obstetrics. A committee was appointed to prepare a resolution urging upon the General Executive Committee of the Association the importance of bringing the subject before the proper Federal and Provincial authorities with a view to the enactment of legislation.

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Mr. L. Salomon's Legacies

THE committee appointed under the late Mr. L. Salomon's will to decide upon the allocation of the testator's residuary estate, anticipate that the latter will amount to at least £120,000, and on this basis they will distribute the sum of £30,000 among ophthalmic hospitals and institutions as follows:—

The Incorporated Association for Promoting the General Welfare of the Blind, £1,000; Blind Employment Factory, £1,000; Barclay Workshop for Blind Women, £250; Central London Ophthalmic Hospital, £1,000; Indigent Blind Visiting Society, £250; the London Association for the Blind, £500; London Society for Teaching and Training the Blind, £1,000; National Institute for the Blind (which includes St. Dunstan's Hostel), £10,000; National Library for the Blind, £500; National Blind Relief Society, £500; Royal Blind Pension Society, £1,000; Royal Eye Hospital, £1,000; Royal Normal College for the Blind, £5,000; Royal Westminster Ophthalmic Hospital, £1,000; Royal School for the Indigent Blind, Leatherhead, £2,000; Royal London Ophthalmic Hospital, £1,000; and the Western Ophthalmic Hospital, £3,000.

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The David Little Homestead Memorial

IN memory of the late David Little, once President of the Ophthalmological Society of the United Kingdom, Mrs. Little has presented to the Homestead Association for helping disabled officers and men of the Army and Navy, the Bank House Estate, at Congleton. The estate, which comprises some twenty acres, includes a roomy house, well-timbered grounds, and a farm with house and buildings. The house will be known as the "David Little Homestead Memorial."

* * * *

Dr. Juan Santos Fernandez

THE scientific societies of Cuba recently presented a gold medal to Dr. Juan Santos Fernandez, of Havana, on the occasion of his seventieth birthday. The Academia de Ciencias, of which he was president, devoted a special meeting to the ceremony of presentation.

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Ophthalmic Terminology

MR. PERCY DUNN contributed an article on "Ophthalmic Terminology, its solecisms, etc.," to the *Medical Press and Circular* of July 25 last that will well repay perusal by ophthalmic surgeons. After showing the futility of such expressions and words as "lenticular" (for 'lental'), "sclerotic" (for 'sclera'), "phthisis bulbi," and "sympathetic ophthalmia" or "ophthalmitis," the writer concludes with a suggestion that British ophthalmic surgeons should endeavour to emulate the Basle undertaking, and originate an L.N.O. (London Nomenclature of Ophthalmology). The criticism that we may venture to make of the proposed reform is that the nomenclature should be a British, if not an Anglo-Saxon, instead of a London affair.

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The Blind

"THERE are 34,000 blind persons in the United Kingdom, one-third being in the workhouses," said Mr. W. Hayes Fisher, President of the Local Government Board, recently at a Mansion House meeting to help the London Society for Teaching and Training the Blind.

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American Academy of Ophthalmology and Oto-Laryngology

IN announcing the twenty-second annual meeting, to be held at Pittsburg, the American Academy of Ophthalmology and Oto-Laryngology urges members to attend "because the Washington authorities feel that it is essential that the various medical societies continue their meetings as in times of peace."

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The Alvarenga Prize

THE next award of the Alvarenga Prize, by the College of Physicians of Philadelphia, will be made on July 14, 1918. The Prize, which amounts to two hundred dollars, may be upon any subject in medicine. Essays, which must be received by the Secretary of the College on or before May 1, 1918, must be typewritten; and if written in a language other than English, should be accompanied by an English translation. Further information will be given by the Secretary of the College.

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Section of Ophthalmology: Royal Society of Medicine

THE Council of the Section of Ophthalmology of the Royal Society of Medicine for 1917-1918 includes: *President*, William Lang; *Vice-Presidents*, William T. Holmes Spicer, George Mackay, A. Hill Griffith, Priestley Smith, A. MacGillivray, Charles Higgens, and H. E. Juler; *Secretaries*, Arthur W. Ormond and Leslie Paton; *Representative on Library Committee*, J. Herbert Parsons; *Representative on Editorial Committee*, Arthur W. Ormond; and *other members*, P. C. Bardsley, Rayner D. Batten, Thomas H. Bickerton, Elmore W. Brewerton, L. V. Cargill, E. Treacher Collins, F. Richardson Cross, R. H. Elliot, Wilfred Harris, C. O. Hawthorne, Gordon Holmes, J. B. Lawford, Arnold Lawson, R. Foster Moore, W. C. Rockliffe, J. B. Story, and F. G. Thomas.

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Ophthalmological Society of the United Kingdom

As already announced in our columns, the next Annual Congress of the Ophthalmological Society of the United Kingdom will be held on Thursday, Friday, and Saturday, May 2, 3, and 4, 1918.

The arrangements will be as follows:—

On May 2 at the Royal Society of Medicine from 10 a.m. to 12.30 p.m. papers will be read. At 2.30 p.m. there will be a discussion on

"Plastic Surgery of the Eyelids," which will be opened by Major H. D. Gillies and Messrs. C. Higgens and T. Harrison Butler. Members are invited to exhibit illustrative cases. Tea at 5 p.m. will be followed at 5.30 p.m. by the Business Meeting of the Society. Members will dine together in the evening.

On May 3 at the Metropolitan Asylums Board Ophthalmia School at Swanley there will be a discussion on "Contagious Diseases of the Conjunctiva." This will be opened by Messrs. J. B. Story and Sydney Stephenson, Major J. F. Cunningham and Captain J. Wharton. At 3.30 p.m. there will be a visit to the Museum of the Royal College of Surgeons and an exhibition of specimens illustrating War Injuries, together with a demonstration of specimens of Eye Injuries by Col. W. T. Lister, C.M.G. At 8 p.m. cases will be shown at the Royal Society of Medicine, to be followed at 8.30 p.m. by the reading of communications.

At 10 a.m. on May 4, a clinical meeting will be held at the National Hospital for the Paralysed and Epileptic, Queen Square, W.C., when members are invited to show ophthalmological cases of neurological interest.

A Museum will be held at the Royal Society of Medicine, with an exhibition of perimeters. Those who desire to show drawings, specimens, or instruments are requested to communicate with Mr. A. C. Hudson, 50, Queen Anne Street, W.1.

It may be added that all communications to the Society should be type-written.

The Secretaries of the Society are Dr. S. A. Kinnier Wilson and Mr. M. S. Mayou.

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Tonsillar Infection

THE *Lancet* (October 6, 1917), referring to an article by Dr. I. Sabotky in the *Boston Medical and Surgical Journal*, reminds us that though the relation between iritis and other forms of ocular inflammation and septic foci in other parts has been recognized in recent years, the importance of the tonsil as a source of infection is not sufficiently recognized. Sabotky has reported a case of iritis and optic neuritis following tonsillitis in which tonsillectomy was curative, thus confirming the connection. The case details are given and seem fairly conclusive that the tonsil was responsible for the ocular inflammation.

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We take this opportunity of thanking the Trustees of the Carnegie Fund for the generous assistance given towards the cost of publishing Dr. H. M. Traquair's paper on "Bitemporal Hemiopia," which appeared in the April, May, and June (1917) numbers of THE BRITISH JOURNAL OF OPHTHALMOLOGY.

FUTURE ARRANGEMENTS

1918

Midland Ophthalmological Society	Feb. 5	Leicester
Section of Ophthalmology, Royal Society of Medicine	Feb. 6	London
Midland Ophthalmological Society	April 2	Birmingham
Ophthalmological Society of the United Kingdom	May 2-4	London
Midland Ophthalmological Society	June 4	Wolverhampton
Section of Ophthalmology, Royal Society of Medicine	June 12	London
American Ophthalmological Society	July 9-10	Eastern Point, New London, Conn.
Oxford Ophthalmological Congress	July 10-12	Oxford.